Manitoba
Energy and Mines
Geological Services

Miscellaneous Publication 91-2, Part A

Mineral Inventory Cards (Supplement to Economic Geology Report ER79-6): Flin Flon-Snow Lake, NTS Areas 63K/9 to 63K/15

Compiled by P. Athayde
Winnipeg, 1991

Energy and Mines

Hon. Harold J. Neufeld
Minister

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W.D. McRitchie
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92-04178/

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO. 727**

PRODUCT Silver **N.T.S. AREA** 63K/9 NE and 63K/16 SE **REF.** AG 2

NAME OF PROPERTY:
Dew Group (Dew 45, 46)

OWNER OR OPERATOR AND ADDRESS
1990- (staked, pending recording)
W. Bruce Dunlop Limited (N.P.L.)
201-2639 Portage Avenue
Winnipeg, Manitoba
R3J 0P7

Inco Limited
Thompson, Manitoba
R8N 1P3

OBJECT LOCATED: Centre of Dew #45 **MINING DIVISION** The Pas

Lat. 54° 44.9' Long. 100° 02.9' UNCERTAINTY: 200 m

Sec. Tp. 66 R. 18WPM

DESCRIPTION OF DEPOSIT

"The area is underlain by granite, flanked to the northeast and west by interbedded argillite and greywacke, and to the southeast by mafic volcanic rocks...The mineralization is hosted by rusty weathered feldspar-porphyritic rocks that are crosscut by a fracture or shear zone trending N50°E. DDH 3 intersected dark grey massive argillite and minor pale green felsic to intermediate dykes; biotite granite was intersected at the base of the hole..."

"Less than 1% disseminated pyrite and stubby arsenopyrite occur within a 2 m wide fracture or shear zone in outcrop. Drill logs from DDH 3 note trace to minor arsenopyrite, with subordinate pyrite, pyrrhotite, and trace chalcopyrite in argillite and felsic dykes. Arsenopyrite occurs as acicular disseminations, solid patches, or veinlets. Mineralization is pervasive throughout most of the drill hole, and is accompanied by quartz stringers and "tiny" lenses of chert. The argillite is locally silicified and/or brecciated." (Ferreira and Fedikow, 1990).

HISTORY OF EXPLORATION AND DEVELOPMENT

The property is located west of Tramping Lake and about 5 km north of Highway Lake.

The deposit was first staked in 1956 under the Dew 45, 46 (P 43656, 57) claims, a group of claims which straddle both sides of the boundary between the File and Tramping Lakes map sheets.

The claims were recorded for the Newkirk Mining Corporation.

Associated minerals or products of value
gold, copper, zinc.

NAME OF PROPERTY **N.T.S. AREA** 63K/9 NE and 63K/16 SE **FILE NO.** 727
Dew Group (Dew 45, 46) **REF.** AG 2

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

That year the Company carried out geophysical surveys (magnetometer, resistivity, SP and VLEM), geological mapping (Scale 1:2400), surface prospecting and stripping, and diamond drilling (Non-confidential Assessment File Nos. 90233, 90234). DDH 3 was drilled to a depth of 126 m (413 ft) to test an anomalous area to the north of a granite contact. Drill core assays of trace copper over long sections of core were reported. An old pit with heavy arsenopyrite mineralization lies near the granite contact and 122 m (400 ft) east of the drilled area. A grab sample of silicified argillite with arsenopyrite from this pit assayed 41.14 g/t (1.2 oz/ton) Ag and 4.46 g/t (0.13 oz/ton) Au, but follow-up chip sampling gave negative results (Non-confidential Asssessment File No. 90234).

An airborne electromagnetic survey was done by Canadian Nickel Company Limited under AP 19 in 1957 (Non-confidential Assessment File No. 91624).

In December 1956 Newkirk Mining Corporation Limited changed its name to Continental Mining Exploration Limited, which amalgamated with Canadian Lithium Mining Corporation in 1958 to form Augustus Exploration Limited. The Dew claims were cancelled in 1961.

In 1973 Granges Exploration AB did airborne electromagnetic and magnetic survey work under AP 112 (Non-confidential Assessment File No. 92019).

The following partial restakings were recorded over the deposit:

Year	Claim Name	Owner
1973	CB 5662	Alfred C. (Lyle) Borgstrom
1973	CB 1023	A.J. O'Donnell
1973	CB 5634	J.R.B. Parres
1976-Area re-opened for staking		
1985-87	Tramp 25 (P 8585E)	Manitoba Mineral Resources Ltd.
1986-88	Amp 23 (P 5972E)	Mark Kreczmer
1990	Berry 10, 12 (P 8377E, 79E) (pending recording)	W. Bruce Dunlop Limited (N.P.L.)
1990	Cher 4 (P 0078F) (pending recording)	Inco Limited

REFERENCES

Alcock, F.J., 1920, The Reed-Wekusko Map-area, northern Manitoba; Geological Survey of Canada, Memoir No. 119, 47p.

Bailes, A.H., 1971, Preliminary compilation of the geology of the Snow Lake - Flin Flon - Sherridon area; Manitoba Mines and Natural Resources, Mines Branch, Geological Paper 1/71, 27p.

Eccles, D.R. and Fedikow, M.A.F., 1985, Mineral occurrence documentation and alteration zone mapping, Snow Lake area; in Manitoba Energy and Mines, Geological Services, Mines Branch, Report of Field Activities, 1985, p. 85, 96.

Ferreira, K.J. and Fedikow, M.A.F., 1990, Mineral deposits and occurrences in the Tramping Lake area, NTS 63K/9; Manitoba Energy and Mines, Geological Services, Mineral Deposit Series, Report No. 7, p. 32-33.

REFERENCES cont'd

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Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 3.

Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. 90233, +90234, 91624, 92019.

Stanton, M.S., 1946, Tramping Lake (northern part) (Descriptive Notes and Map); Geological Survey of Canada, Paper 46-19.

MAP REFERENCES

#Map 63K/9, Tramping Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa.

Map 2465G, Tramping Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/9 g,h, McClarty Lake, (Aeromagnetic Gradiometer), Scale 1:20 000; GSC Open File 937, Geological Survey of Canada (1982).

Maps C 20 352G, C 40 093G, Tramping Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

Map OF84-2, South of the Flin Flon - Snow Lake area, (Airborne gradiometer interpretation), Scale 1:100 000 - Accompanying Report by Hosain (1984), Manitoba Mineral Resources Division.

Maps OF87-11-1A/OF87-11-1B, Tramping Lake area, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 1801, Reed and Wekusko Lakes region, (Geology), Scale 1:126 720 - Accompanying Memoir by Alcock (1920), Geological Survey of Canada.

Preliminary Map 46-19, Tramping Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Stanton (1946), Geological Survey of Canada.

Map 906A, Tramping Lake area, (Geology), Scale 1:63 360 - Accompanying Memoir by Harrison (1949), Geological Survey of Canada.

Map 929A, File Lake, (Geology), Scale 1:63 360 - Accompanying Memoir by Harrison (1949), Geological Survey of Canada.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Map, Reed Lake, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).

NAME OF PROPERTY		**FILE NO.** 727
Dew Group (Dew 45, 46)	**N.T.S. AREA** 63K/9 NE 63K/16 SE	**REF.** AG 2

MAP REFERENCES cont'd

Preliminary Map 1988 SL-3, Tramping Lake, (Surficial Geology and Aggregate Resources), Scale 1:50 000, by M. Mihychuk, Manitoba Mineral Resources Division.

MDS Map No. 7, Tramping Lake (63K/9) area, (Mineral deposits and occurrences), Scale 1:50 000 - Accompanying Report by Ferreira and Fedikow (1990), Manitoba Energy and Mines.

*Claim Map Series 63K/9 NE, Scale 1:31 680, Circa 1960, Mining Recording, Manitoba Mines Branch.

Claim Map Series 63K/16 SE, Scale 1:31 680, Circa 1960, Mining Recording, Manitoba Mines Branch.

Airphoto Number: A26366-233.

REMARKS

1. This card was previously mineral inventory card 63K/9 NE CU 3, circa 1975, which has been rewritten into two cards, 63K/9 AG 2 and 63K/16 ZN 8.
2. The deposit is located in an area of "low magnetic intensity".
3. A 169 m deep drill hole on Dew 25, 900 m northeast, returned drill core assays of trace copper over long sections of argillite core and up to 11.66 g/t (0.34 oz/ton) Ag (Non-confidential Assessment File No. 90234; see 63K/16 ZN 8).

Comp./Rev.	RM	PA
By Date	12-75	09-90

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO. 725**

PRODUCT Copper	**N.T.S. AREA** 63K/9 SW	**REF.** CU 1

NAME OF PROPERTY:
Spruce Point

OWNER OR OPERATOR AND ADDRESS
1990-Hudson Bay Mining and Smelting
Co., Limited (HBMS)
P.O. Box 1500
Flin Flon
Manitoba
R8A 1N9

OBJECT LOCATED: anomaly

MINING DIVISION The Pas

Lat. 54° 34.55'	Long. 100° 24.75'	UNCERTAINTY: 500 m
Sec. 34	Tp. 64	R. 20 WPM

DESCRIPTION OF DEPOSIT

The deposit is situated beneath 3 m of overburden and 12 m of Ordovician limestone within Precambrian sericitized felsic volcanic host rocks.

"It is hosted by an overturned sequence of fragmental rhyolite in contact with basalt to the east and west..........The deposit strikes 015°, has an average dip of 80°E, and plunges 36°SE. It has a strike length of 450-500 m, a maximum width of 18 m and an approximate average thickness of 9 m.......Mineralization consists of solid, medium grained pyrite, sphalerite, chalcopyrite, and pyrrhotite in four lenses along one stratigraphic zone. Galena is present in trace amounts. Lenses No. 1 and 3 are Cu-Zn rich; the No. 4 lens is Cu-Au rich; and the No. 5 lens is Zn rich......The deposit has an internal metal zoning characterized by a north to south grading of Cu-rich ore to Zn-rich ore. Erratic Au mineralization associated with arsenopyrite is present in the argillite unit directly above the sulphide zones." (Ferreira and Fedikow, 1990).

According to the Northern Miner (November 22, 1973): "The main or No. 1 lens has a strike length of 400 ft (121.9 m) and a plunge length of 1200 ft (365.7 m), extending from a vertical depth of 150 ft (45.7 m) to 750 ft (228.6 m). The No. 2 lens appears to be of limited extent......indications of a third lens were found at a vertical depth of 1150 ft (350.5 m).".

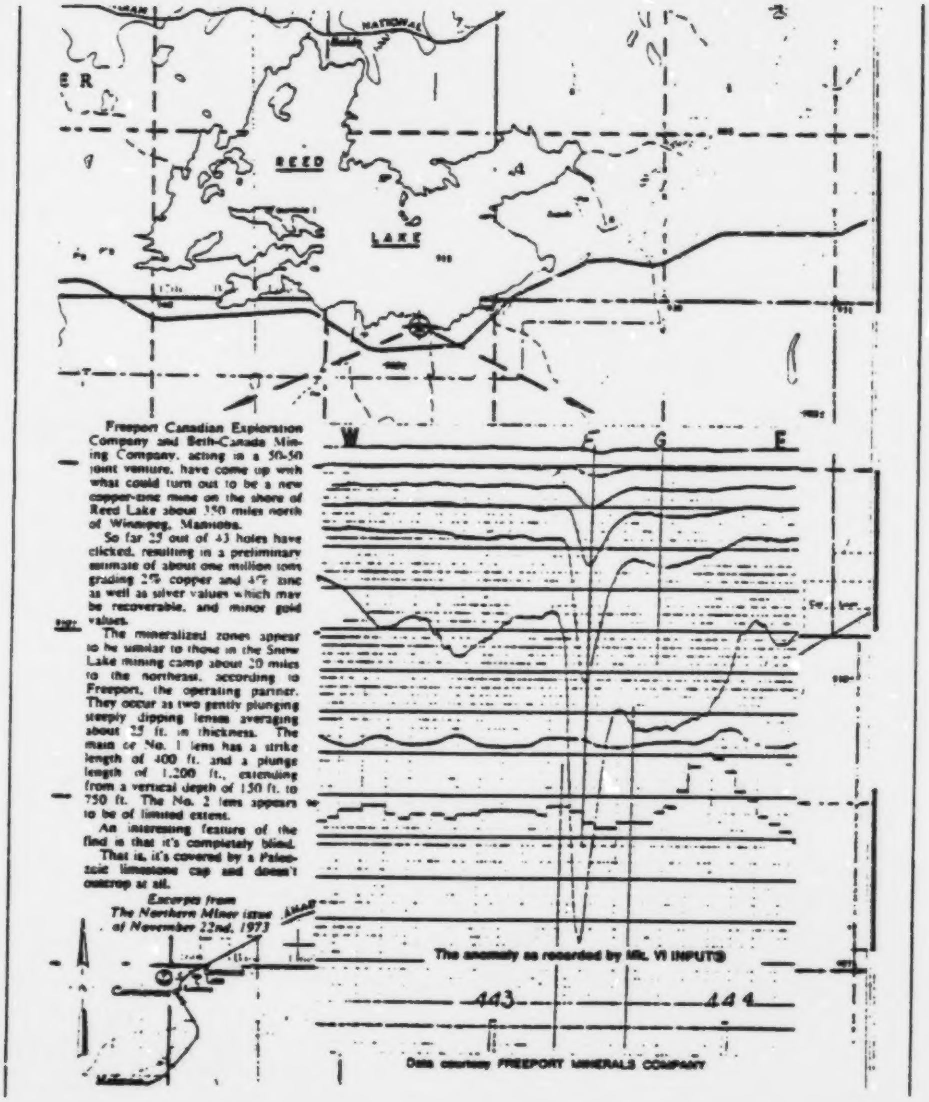
HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located near the south shore of Reed Lake, 1.6 km north of Provincial Road 391, and 42 km southwest of Snow Lake.

In 1956 an airborne electromagnetic and magnetic survey was done by Parrex Syndicate under Airborne Permit No. 16 (Non-confidential Assessment File No. 91708). In April 1957 Exploration Reservation No. 5 was issued to Bert Newman who then assigned it to Parmlee Manitoba Mining Company Limited in September 1957. An airborne electromagnetic and magnetic survey and a ground electromagnetic survey was done that year (Non-confidential Assessment File No. 91707). The ground re-opened for staking in 1959.

Associated minerals or products of value
zinc, silver, gold

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd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The anomaly as recorded by Mk. VI INPUT®
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Data courtesy FREEPORT MINERALS COMPANY

Freeport Canadian Exploration Company and Beth-Canada Mining Company, acting in a 50-50 joint venture, have come up with what could turn out to be a new copper-zinc mine on the shore of Reed Lake about 350 miles north of Winnipeg, Manitoba.

So far 25 out of 43 holes have clicked, resulting in a preliminary estimate of about one million tons grading 2% copper and 4% zinc as well as silver values which may be recoverable, and minor gold values.

The mineralized zones appear to be similar to those in the Snow Lake mining camp about 20 miles to the northeast, according to Freeport, the operating partner. They occur as two gently plunging steeply dipping lenses averaging about 25 ft. in thickness. The main or No. 1 lens has a strike length of 400 ft. and a plunge length of 1,200 ft., extending from a vertical depth of 150 ft. to 750 ft. The No. 2 lens appears to be of limited extent.

An interesting feature of the find is that it's completely blind.

That is, it's covered by a Paleozoic limestone cap and doesn't outcrop at all.

Excerpts from The Northern Miner issue of November 22nd, 1973

Figure 1.
Source: The Northern Miner, December 6, 1973.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

In 1961 Exploration Reservation No. 19 was issued to Canadian Nickel Company, Limited. That year a hole was drilled two claims south of this area, on Reed 46, to a depth of 276.5 m (907 ft) and two other holes were drilled west of this area (Non-confidential Assessment File No. 91837). The area re-opened for staking in 1962.

In 1967 Hudson Bay Exploration and Development Company Limited (H.B.E.D.) did a helicopter EM and radiometric survey under Airborne Permit No. 67 (Non-confidential Assessment File No. 91661).

In November 1971 M.J. Moreau took out Exploration Reservation No. 107 (30 701 hectares) over the area south of Reed Lake. From January to March 1972 a Questor Input survey was flown for Freeport Canadian Exploration Company and Beth-Canada Mining Company acting in a 50-50 joint venture. The "airborne geophysical survey outlined an anomaly running about two thirds on the south shore of Reed Lake and one third underneath it" (Fig. 1). Drilling began in the winter of 1972 and the first mineralized section was cut in the second last hole of the program (Northern Miner, November 22, 1973).

Drilling in the fall of 1973 outlined the orebody with 25 holes out of 43 drilled and "a preliminary estimate of about one million tons (0.9 million tonnes) grading 2% copper and 4% zinc as well as silver values which may be recoverable, and minor gold values" (Northern Miner, November 22, 1973).

Reed No. 19 (P 4414E) was staked over the deposit in 1973 by Ingi Bjornson as part of the 50 claim Reed Group, which was then assigned to M.J. Moreau, and then to Freeport Canadian Exploration Company.

From January to April 1974 the deposit was to be tested on strike and down dip using five drills (Northern Miner, November 22, 1973). Work was continuing on the property in 1974 and 1975 (Northern Miner, March 7, 1974 and March 6, 1975).

Reed No. 19 became part of Explored Area Lease No. 26 along with 16 other Reed claims and a few Reservations of Mineral Rights (dispositions over open water) in August 1976. The property was acquired in December 1977 by H.B.E.D. through Anglo American Corporation of Canada Limited for "a cash payment of approximately $800 000 and the assumption of a royalty obligation to the original prospector-vendors of 25 cent/ton of ore mined against which an advance royalty payment of $125 000 had already been made". It was estimated that the deposit contained "500 000 tons (453 000 tonnes) assaying 2.8% copper and 4.5% zinc" (HBMS, Annual Report 1977, p. 25).

Construction of an underground mine was started in August 1978; and shaft sinking began in April 1980 and was completed to a depth of 655 m (2150 ft.) in July 1981. Lateral development was underway and a significant amount of development ore was expected to be treated in 1982 (Northern Miner, January 21, 1982; HBMS, Annual Reports, 1978 to 1981).

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

As of January 1, 1981 proven ore reserves were 559 000 tons (507 000 tonnes) averaging 2.70% Cu, 4.3% Zn, 32.57 g/t (0.95 oz/ton) Ag and 1.92 g/t (0.056 oz/ton) Au (Department of EMR, Mineral Bulletin M.R. 191, p. 17).

E.A.L. 26 was discontinued on July 11, 1981 and a new lease is pending. In 1982, former E.A.L. 26 was split into two parts (Lease 1, 2) and its acreage was increased. The property was transferred to HBMS in 1983.

As of December 31 1984 ore reserves were reported at 1 164 508 tonnes at 2.24% Cu and 1.7% Zn (Esposito, 1986).

Reserves as of December 31 1987 were 567 000 tonnes grading 2.15% Cu, 1.7% Zn, 1.44 g/t Au and 15.04 g/t Ag (F. Bill, HBMS, March 17, 1989 in Ferreira and Fedikow, 1990).

According to Ferreira and Fedikow (1990), "The No. 1 lens was first to be mined. Currently the bulk of ore production is from the No. 3 lens. The No. 4 lens is under development, and the No. 5 lens is being explored. The mine has been developed from the 45 m to the 574 m levels and is open at depth.".

HISTORY OF PRODUCTION

Tonnage figures mined for the Spruce Point Mine, which was still in production in 1990, have been reported by various sources as follows (*Esposito, 1986; Ferreira and Fedikow, 1990):

Year	Tonnes	Cu%	Zn%	Au g/t	Ag g/t
1984*	169 934	2.69	2.90		
1982-1984*	428 774	2.64	3.50		
1982-1988	1 123 000	2.36	2.80	2.0	25.0

REFERENCES

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Aggarwal, P.K. and Nesbitt, B.E., 1987, Pressure and temperature conditions of metamorphism in the vicinity of three massive sulfide deposits, Flin Flon-Snow Lake belt, Manitoba; Canadian Journal of Earth Sciences, v. 24, No. 11, p. 2305-2327.

Bailes, A.H., 1971, Preliminary compilation of the geology of the Snow Lake - Flin Flon - Sherridon area; Manitoba Mines and Natural Resources, Mines Branch, Geological Paper 1/71, 27p.

Esposito, B.E., 1986, Copper and Zinc in Manitoba; Manitoba Energy and Mines, Mineral Education Series, p. 13.

Ferreira, K.J. and Fedikow, M.A.F., 1990, Mineral deposits and occurrences in the Tramping Lake area, NTS 63K/9; Manitoba Energy and Mines, Geological Services, Mineral Deposit Series, Report No. 7, p. 7-9, 73-76.

REFERENCES cont'd

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Gale, G.H., Baldwin, D.A., and Koo, J., 1980, A geological evaluation of Precambrian massive sulphide deposit potential in Manitoba; Manitoba Department of Energy and Mines, Mineral Resources Division, Economic Geology Report ER79-1, p. 98.

Gunter, W.R. and Yamada, P.H., 1986, Evaluation of industrial mineral occurrences in the Flin Flon - Snow Lake area; in Manitoba Energy and Mines, Minerals Division, Report of Field Activities, 1986, p. 86, 91.

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Hosain, I.T., 1980, Summary of results of geophysical data compilation from open assessment reports Flin Flon - Snow Lake and Bird River greenstone belts; Manitoba Energy and Mines, Mineral Resources Division, Economic Geology Paper EP79-1, p. 6.

Hosain, I.T., 1984, Interpretation of airborne magnetic gradiometer surveys of the area south of the Flin Flon - Snow Lake belt (parts of NTS 63K and 63J); Manitoba Energy and Mines, Mineral Resources Division, Mines Branch, Open File Report OF84-2, 26p.

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Hudson Bay Mining and Smelting Co., Limited; The Financial Post Corporation Service (Information card, circa December 19, 1981), Maclean Hunter Publishing Company Limited.

Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. 90244, 91661, 91707, 91708, 91735, 91837.
b Corporation Files; Freeport Canadian Exploration Company; Hudson Bay Mining and Smelting Co., Limited (1986 File: "This is Hudson Bay Mining...").

McCabe, H.R., 1984, Stratigraphic mapping and stratigraphic and industrial minerals core hole program; in Manitoba Energy and Mines, Mineral Resources, Report of Field Activities, 1984, p. 139, 142.

McRitchie, W.D. and Hosain, I., 1984, Project Cormorant - sub-Paleozoic investigations south of Flin Flon and Snow Lake; in Manitoba Energy and Mines, Mineral Resources, Report of Field Activities, 1984, p. 83.

Northern Lights, v. 41, No. 2, Summer 1981, p. 18; in Manitoba Mines Branch, Corporation File, Hudson Bay Mining and Smelting Co., Limited.

Price, D.P., 1977, Geology and economic potential of the Flin Flon - Snow Lake area; in University of Manitoba, Centre for Precambrian Studies, 1977 Annual Report, p. 67, 78.

White, R.L., 1981, Diverse mines feed Hudson Bay's Flin Flon zinc copper complex; Engineering and Mining Journal, v. 182, No. 11, p. 169.

NAME OF PROPERTY **FILE NO.** 725
Spruce Point **N.T.S. AREA** 63K/9 SW **REF.** CU 1

MAP REFERENCES

*Map 63K/9, Tramping Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa.
Map 2465G, Tramping Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.
Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).
Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).
Map 63K/9 c,d, McClarty Lake, (Aeromagnetic Gradiometer), Scale 1:20 000; GSC Open File 937, Geological Survey of Canada (1982).
Maps C 20 352G, C 40 093G, Tramping Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).
Map OF84-2, South of the Flin Flon - Snow Lake area, (Airborne gradiometer interpretation), Scale 1:100 000 - Accompanying Report by Hosain (1984), Manitoba Mineral Resources Division.
Maps OF87-11-1A/OF87-11-1B, Tramping Lake area, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.
Map 906A, Tramping Lake area, (Geology), Scale 1:63 360 - Accompanying Memoir by Harrison (1949), Geological Survey of Canada.
Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.
#Figure "Freeport Used Questor"; Northern Miner, December 6, 1973.
MDS Map No. 7, Mineral deposits and occurrences in the Tramping Lake (63K/9) area, (Geology), Scale 1:50 000 - Accompanying Report by Ferreira and Fedikow (1990), Manitoba Energy and Mines.
Preliminary Map 1977 CP-1, Tramping Lake, (Quaternary Geology), Scale 1:50 000, by V. Singhroy, Manitoba Mineral Resources Division.
Map, Reed Lake, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).
Claim Map Series 63K/9 SW, Scale 1:31 680, Circa 1975, Mining Recording, Manitoba Mines Branch.

REMARKS

1. Fine-grained pyrite and pyrrhotite in chloritic graphite schist formed up to 40% of short (1.22 m) sections of drill core from a hole drilled on Base No. 21 and 22, approximately 3.5 km east of the Spruce Point deposit. Assays showed only traces of copper and zinc, and no nickel. Maximum assays of 0.68 g/t (0.02 oz/ton) gold and 3.43 g/t (0.10 oz/ton) silver were reported (Non-confidential Assessment File No. 90244; Location #34, Ferreira and Fedikow, 1990, p. 75).
2. About 3.8 km northwest, a hole (ddh 19549) returned 0.15% nickel, 0.04% Cu over 3.29 m (10.8 ft) at a drilled depth of 137.9 m (452.6 ft) (Non-confidential Assessment File No. 91735; Location #33, Ferreira and Fedikow, 1990, p. 73).

Comp./Rev.	RM	SMH	JDB	AGJ	PA
By Date	11-75	01-78	08-83	02-87	09-90

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO. 726**

PRODUCT Copper	**N.T.S. AREA** 63K/9 NW	**REF.** CU 2

NAME OF PROPERTY:
Dumas #6

OWNER OR OPERATOR AND ADDRESS
1990-Open

OBJECT LOCATED: Centre of Dumas #6 **MINING DIVISION** The Pas

Lat. 54° 40.2'	Long. 100° 22.8'	UNCERTAINTY: 200 m
Sec.	Tp. 65	R. 20 WPM

DESCRIPTION OF DEPOSIT

A drilling program conducted in 1947 intersected fine to medium-grained quartz gabbro and quartz-diorite, and an aplite dyke. Sulphides consisted mainly of disseminated chalcopyrite.

The four most promising drill holes gave the following results:

DDH #	Width	Cu	Ni
#1	2.4 m (8 ft)	1.02%	0.20%
#2A	5.5 m (18 ft)	1.45%	0.15%
#2	5.3 m (17.5 ft)	1.28%	0.31%
#3	0.7 m (2.5 ft)	1.35%	0.47%

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is about 1 km south of Jackfish Lake.

The ground was first recorded in 1928 as N.C. #20 (File No. 206899) by W. Cote. The cancellation date is not known.

In 1947, A. Dumas recorded the Dumas #6 (P 16945) claim. Nine holes, totalling 199 m (653 ft), were drilled that year by Parmac Diamond Drilling and Exploration Company. Assays of up to 0.59% Ni, 1.45% Cu, 0.03% Co and 0.34 g/t (0.01 oz/ton) Au were reported (Non-confidential Assessment File No. 90253). In 1949 a geological survey was carried out which was intended to summarize the previous drilling (Non-confidential Assessment File No. 90249). The claim was cancelled in 1950.

Later claim history is tabulated below:

Year	Activity	
1950	Dumas #6 (P 22707)	W.S. Uhrich

Associated minerals or products of value
nickel, gold, cobalt

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Year	Activity (cont'd)	
1951	- Dumas #6 transferred to A.L. Parres. A magnetometer survey was done by Canadian Nickel Company Limited which had an option on the property (Non-confidential Assessment File No. 90247).	
1952	Work was reported under a claim grouping	
1954	Option abandoned	
1955-56	Nick #6 (P 34058)	E. Hopkinson
1956-57	Cop #8 (P 40941) - transferred to Chipman Lake Mines Limited in 1956	Olaf Hanson
1962-64	Jack #52 (P 2060A) - transferred to Conwest Exploration Company Limited in 1962	Gilbert Chief
1965-66	Fire #14-17 (P 968C-971C)	J.M. Millar
1967	Hudson Bay Exploration and Development Company Limited (H.B.E.D.) did a helicopter EM and radiometric survey under Airborne Permit No. 67 (Non-confidential Assessment File No. 91661).	
1968	Mike #2-5 (P 476E-479E) - transferred immediately to W.B. Dunlop Limited - H.B.E.D. optioned the property in 1969. The claims were grouped and diamond drilling and a geophysical survey was recorded in 1970-1971. One hole drilled to a depth of 94.2 m (309 ft) intersected anorthosite and gabbro with disseminated sulphides (DDH Jack 7; Non-confidential Assessment File No. 92236). The option was abandoned in 1972.	Walter Head
1979	cancelled	
1986	Jac 6 (P 5671E)	W. Bruce Dunlop Limited (N.P.L.)
1988	cancelled	

REFERENCES

Alcock, F.J., 1920, The Reed-Wekusko Map-area, northern Manitoba; Geological Survey of Canada, Memoir No. 119, 47p.

Bailes, A.H., 1971, Preliminary compilation of the geology of the Snow Lake - Flin Flon - Sherridon area; Manitoba Mines and Natural Resources, Mines Branch, Geological Paper 1/71, 27p.

Ferreira, K.J. and Fedikow, M.A.F., 1990, Mineral deposits and occurrences in the Tramping Lake area, NTS 63K/9; Manitoba Energy and Mines, Geological Services, Mineral Deposit Series, Report No. 7, p. 27-29.

Harrison, J.M., 1949, Geology and mineral deposits of File-Tramping Lakes area, Manitoba; Geological Survey of Canada, Memoir No. 250, 92p.

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Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 8.

REFERENCES cont'd

Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. 90246, 90247, 90249, 90253, 91661, 92236.
Stanton, M.S., 1946, Tramping Lake (northern part) (Descriptive Notes and Map); Geological Survey of Canada, Paper 46-19.

MAP REFERENCES

#Map 63K/9, Tramping Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa.
Map 2465G, Tramping Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.
Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).
Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).
Map 63K/9 e,f, McClarty Lake, (Aeromagnetic Gradiometer), Scale 1:20 000; GSC Open File 937, Geological Survey of Canada (1982).
Maps C 20 352G, C 40 093G, Tramping Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).
Map OF84-2, South of the Flin Flon - Snow Lake area, (Airborne gradiometer interpretation), Scale 1:100 000 - Accompanying Report by Hosain (1984), Manitoba Mineral Resources Division.
Maps OF87-11-1A/OF87-11-1B, Tramping Lake area, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.
Map 1801, Reed and Wekusko Lakes region, (Geology), Scale 1:126 720 - Accompanying Memoir by Alcock (1920), Geological Survey of Canada.
Preliminary Map 46-19, Tramping Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Stanton (1946), Geological Survey of Canada.
Map 906A, Tramping Lake area, (Geology), Scale 1:63 360 - Accompanying Memoir by Harrison (1949), Geological Survey of Canada.
Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.
MDS Map No. 7, Tramping Lake (63K/9) area, (Mineral deposits and occurrences), Scale 1:50 000 - Accompanying Report by Ferreira and Fedikow (1990), Manitoba Energy and Mines.
*Claim Map Series 63K/9 NW, Scale 1:31 680, Circa 1975, Mining Recording, Manitoba Mines Branch.

REMARKS

The deposit flanks a magnetic "low".

Comp./Rev.	RM	PA
By Date	11-75	09-90

PRODUCT Nickel **N.T.S. AREA** 63K/9 NW **REF.** NI 1

NAME OF PROPERTY:
New Colony Group

OWNER OR OPERATOR AND ADDRESS
1990-W. Bruce Dunlop Limited (N.P.L.)
201 - 2639 Portage Avenue
Winnipeg, Manitoba
R3J 0P7

OBJECT LOCATED: Centre of EEL #118 **MINING DIVISION** The Pas

Lat. 54° 40.9' Long. 100° 22.1' UNCERTAINTY: 200 m

Sec. Tp. 66 R. 20 WPM

DESCRIPTION OF DEPOSIT

The area is underlain by greenstone and sedimentary gneiss which has been intruded by basic and ultrabasic intrusive bodies.

Medium-grained norite, gabbro, quartz-gabbro and amphibolite were mapped on the property by Mirado Nickel Mines Limited.

Drill holes intersected disseminated sulphides (up to 30%), comprising mainly pyrrhotite, chalcopyrite and marcasite. Minor sphalerite was reported in trenches.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located on the east side of Jackfish Lake, about a third of the way north from its southern shore.

C.E. Lee first recorded the New Colony #2 (File No. 200228) claim in 1928. Manitoba Basin Mining Co., Limited did some surface work in 1928-29. The Company reported tracing a "north-south zone of fractured and weathered basic rocks, mineralized with pyrrhotite, chalcopyrite and sphalerite, for a distance of 1500 ft (457.2 m)". Widths of up to 9 m (30 ft) were reported. The cancellation date of the claim is not known.

At this point the claim history becomes complex due to complicated restaking procedures. Roy Leslie recorded J.F. 1, 2 (P 6081, 6082) in 1942. He later transferred the claims to Norman Leslie. During the same year J.R. Campbell recorded the adjacent Jack 1, 2 (P 6098, 6099) claims. In 1947 all four claims were acquired by Mary Hale. See 63K/9 NI 2.

Diamond drilling was reported in 1947 but results are not available. Some geological mapping was done by A.L. Parres (Non-confidential Assessment File No. 90249). In 1950 more diamond drilling was reported. One hole (ddh 29) was drilled to a depth of 146.3 m (480 ft) on J.F. 1. Two holes totalling 293.2 m (962 ft) were completed on Jack 2. Drill core assays of up to 0.13% Cu and 0.23% Ni over 3.8 m (12.5 ft) were reported (ddh 26, 27; Non-confidential Assessment File No. 90256). Another two holes totalling 50.3 m (165 ft) were drilled on J.F. 2 (Non-confidential Assessment File No. 90259).

Associated minerals or products of value
copper

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Mary Hale optioned the property to Canadian Nickel Company Limited.

A magnetometer and electromagnetic survey was carried out over the claims in 1951. A number of magnetic anomalies were indicated in the area some of which were in the order of 1200' - 1600' and the readings up to 7000 gammas above base intensity (Non-confidential Assessment File Nos. 90258, 90247).

During 1952 diamond drilling done under a grouping certificate was applied to the property. In 1954 four diamond drill holes were completed on J.F. 1 for a total of 181.4 m (595 ft) and four holes for a total of 114.3 m (375 ft) were completed on J.F. 2 (Non-confidential Assessment File No. 90259). The option was abandoned in 1954. In 1955, another two holes totalling 116.7 m (383 ft) were drilled on J.F. 2 (Non-confidential Assessment File No. 90259).

Mirado Nickel Mines Limited acquired the property from Halestone Mining Syndicate in 1956 (Mirado Nickel Mines Limited, Prospectus, June 21, 1956). They carried out detailed geological mapping of the property in 1957 (Non-confidential Assessment File No. 90246). An electromagnetic survey was completed by Central Geophysics Ltd. for Mirado in 1956-57 (Non-confidential Assessment File No. 90261). A moderate conductor was outlined on J.F. 2 along with several other conductors on adjacent properties. Mirado cancelled the claims in 1961.

The property was restaked as Jack 27, 34 (P 2035A, P 2042A) by Steve Bachnick in 1962. He transferred the claims to Conwest Exploration Company Limited. Conwest carried out an electromagnetic survey in 1964. The property was transferred to W.B. Dunlop Limited in 1965 which reported diamond drilling but results are not known. The Jack 27 claim was cancelled in mid-1967; the Jack 34 in early 1968.

In 1967 Hudson Bay Exploration and Development Company Limited (H.B.E.D.) did a helicopter EM and radiometric survey under Airborne Permit No. 67 (Non-confidential Assessment File No. 91661).

Glenn Hogarth recorded EEL 118, 121 (P 5748D, 51D) in 1968 and transferred the claims soon after to H.B.E.D.. An electromagnetic survey was recorded in 1969 as was diamond drilling from 1970 to 1973. One hole intersected "siliceous to massive pyrrhotite with scattered traces of sphalerite" in the 30.5 - 104.9 m (100 - 344.4 ft) section of core; quartzite with pyrrhotite, pyrite and trace sphalerite and granite were also intersected. Most of the drilling was done on adjacent claims to the southwest. EEL 118, 121 were cancelled in 1974.

The following restakings were recorded:

Year	Claim	Owner
1981	Fish 3 (W 47151)	Falconbridge Nickel Mines Limited

- In 1982 Falconbridge completed a geological interpretation map and a lithogeochemical sampling program that found anomalous Cu/Zn values on both shores of Jackfish Lake
- transferred to W. Bruce Dunlop Limited in 1983
- cancelled 1984

Year	Claim	Owner
1986	Jac 4 (P 5669E)	W. Bruce Dunlop Limited (N.P.L.)

REFERENCES

Alcock, F.J., 1920, The Reed-Wekusko Map-area, northern Manitoba; Geological Survey of Canada, Memoir No. 119, 47p.

Bailes, A.H., 1971, Preliminary compilation of the geology of the Snow Lake - Flin Flon - Sherridon area; Manitoba Mines and Natural Resources, Mines Branch, Geological Paper 1/71, 27p.

Davies, J.F., Bannatyne, B.B., Barry, G.S., and McCabe, H.R., 1962, Geology and mineral resources of Manitoba; Manitoba Mines and Natural Resources, Mines Branch, p. 78-92.

Ferreira, K.J. and Fedikow, M.A.F., 1990, Mineral deposits and occurrences in the Tramping Lake area, NTS 63K/9; Manitoba Energy and Mines, Geological Services, Mineral Deposit Series, Report No. 7, p. 12-13, 16-17.

++Harrison, J.M., 1949, Geology and mineral deposits of File-Tramping Lakes area, Manitoba; Geological Survey of Canada, Memoir No. 250, p. 81.

Hosain, I.T., 1984, Interpretation of airborne magnetic gradiometer surveys of the area south of the Flin Flon - Snow Lake belt (parts of NTS 63K and 63J); Manitoba Energy and Mines, Mineral Resources Division, Mines Branch, Open File Report OF84-2, 26p.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 8-9.

Manitoba Mines Branch:

a Non-confidential Assessment Files; File Nos. 90246, 90247, 90249, 90256, 90257, 90258, 90259, 90261, 91661, 92236; 70591 and 98477 (non-confidential parts).

b Corporation Files; Manitoba Basin Mining Co., Limited; Mirado Nickel Mines Limited

b Mining Engineering Files; Manitoba Basin Mining Co., Limited;

Stanton, M.S., 1946, Tramping Lake (northern part) (Descriptive Notes and Map); Geological Survey of Canada, Paper 46-19.

Wright, J.F., 1938, Geology and mineral deposits of a part of northwest Manitoba; Geological Survey of Canada, Summary Report 1930, Part C, p. 72-73.

MAP REFERENCES

#Map 63K/9, Tramping Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa.

Map 2465G, Tramping Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/9 e,f, McClarty Lake, (Aeromagnetic Gradiometer), Scale 1:20 000; GSC Open File 937, Geological Survey of Canada (1982).

Maps C 20 352G, C 40 093G, Tramping Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

MAP REFERENCES cont'd

Map OF84-2, South of the Flin Flon - Snow Lake area, (Airborne gradiometer interpretation), Scale 1:100 000 - Accompanying Report by Hosain (1984), Manitoba Mineral Resources Division.

Maps OF87-11-1A/OF87-11-1B, Tramping Lake area, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 1801, Reed and Wekusko Lakes region, (Geology), Scale 1:126 720 - Accompanying Memoir by Alcock (1920), Geological Survey of Canada.

Preliminary Map 46-19, Tramping Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Stanton (1946), Geological Survey of Canada.

Map 906A, Tramping Lake area, (Geology), Scale 1:63 360 - Accompanying Memoir by Harrison (1949), Geological Survey of Canada.

Map, Jackfish Lake property, (Geology), Scale 1:2400 - Accompanying Non-confidential Assessment File No. 90246, Manitoba Mines Branch.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Map 63K, Cormorant Lake, (Geology map and notes), Scale 1:250 000, by Taiga Consultants Ltd.; GSC Open File 1381, Geological Survey of Canada (1986).

MDS Map No. 7, Tramping Lake (63K/9) area, (Mineral deposits and occurrences), Scale 1:50 000 - Accompanying Report by Ferreira and Fedikow (1990), Manitoba Energy and Mines.

Map, Reed Lake, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).

Claim Map Series 63K/9 NW, Scale 1:31 680, Circa 1973, Mining Recording, Manitoba Mines Branch.

REMARKS

1. The deposit is located on the flank of a magnetic "high".

2. Zinc and molybdenite were reported in drill core from the Jack Pot 10 (P 10841) claim, located just north of J.F. 1 (Non-confidential Assessment File No. 90259).

Comp./Rev.	RM	PA
By Date	11-75	09-90

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO.** 729

PRODUCT Nickel **N.T.S. AREA** 63K/9 NW **REF.** NI 2

NAME OF PROPERTY:
Jack Pot

OWNER OR OPERATOR AND ADDRESS
1990-W. Bruce Dunlop Limited (N.P.L.)
201 - 2639 Portage Avenue
Winnipeg, Manitoba
R3J 0P7

OBJECT LOCATED: Junction of Jack Pot #3, 4, 5, 6

MINING DIVISION The Pas

Lat. 54° 41.6' Long. 100° 22.9' **UNCERTAINTY:** 200 m

Sec. Tp. 66 R. 20 WPM

DESCRIPTION OF DEPOSIT

The deposit is situated in the central part of a mafic complex that varies in composition from pyroxenite to gabbro and quartz gabbro, as mapped by Harrison (1949). Coarse-grained anorthositic gabbro and peridotite were mapped by Mirado Nickel Mines Limited.

Drill hole assays of up to 1.01% nickel and 0.32% copper were reported. The best nickel assays were in gabbro and the best copper assays were in felsite.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located on the west side of Jackfish Lake.

The ground was first recorded on July 22, 1928 as N.C. 8, 9 (12146, 47) by T. Cote and W. Cote. Stripping done in 1928-29 by Manitoba Basin Mining Co., Limited exposed "a body heavily mineralized with pyrrhotite which can be traced in a northerly direction for about 3000 ft (914.4 m)". Widths of up to 110 ft (33.5 m) and copper and zinc values were reported. The cancellation date of these claims is not known.

This ground was later restaked as Jack Pot 3 - 8 (P 10834-39) in 1949. Jack Pot 3 - 7 were recorded by Mrs. Mary Hale but Jack Pot 8 was recorded by Angus Boag and then transferred to Mary Hale in 1947. In 1950 three holes totalling 312.4 m (1025 ft) were drilled on Jack Pot 8. Maximum drill core assays were 1.01% for nickel, 0.19% for copper (Non-confidential Assessment File No. 90256).

In 1951 Canadian Nickel Company Limited took out an option on the property and did a magnetometer and electromagnetic survey (Non-confidential Assessment File Nos. 90258, 90247).

Associated minerals or products of value
copper, zinc.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

That year, one diamond drill hole was drilled to a depth of 179 m (588 ft) on Jack Pot 8, another was drilled to 207 m (681 ft) on Jack Pot 3; drill core assays of up to 0.4% Ni and 0.32% Cu were reported (ddh #9411, 9412; Non-confidential Assessment File No. 90257; Ferreira and Fedikow, 1990, p. 20-21). Canadian Nickel abandoned the option in 1954.

Mirado Nickel Mines Limited acquired the property from Halestone Mining Syndicate in 1956 (Mirado Nickel Mines Limited, Prospectus, June 21, 1956). They carried out detailed geological mapping of the property in 1957 (Non-confidential Assessment File No. 90246). An electromagnetic survey was completed by Central Geophysics Ltd. for Mirado in 1956-57 (Non-confidential Assessment File No. 90261). A moderate conductor was outlined on Jack Pot 6. Diamond drilling (no information available) was also carried out before all the claims were cancelled in 1959, except for Jack Pot 8 which was cancelled one year later.

The ground was restaked in 1962 as Jack 8, 17 (P 2016A, 25A) by W.B. Dunlop and as Jack 20 (P 2028A) by Steve Bachnick. The claims were transferred to Conwest Exploration Company Limited. An elecromagnetic survey was conducted in 1964 by Conwest before they transferred the claims to W.B. Dunlop in 1965. Diamond drilling was reported in 1965 but results are not available.

Jack 8 was cancelled in 1967.

In 1967 Hudson Bay Exploration and Development Company Limited (H.B.E.D.) did a helicopter EM and radiometric survey under Airborne Permit No. 67 (Non-confidential Assessment File No. 91661). H.B.E.D. took out an option on the property in 1969. In 1969 and 1970 diamond drilling and a geological survey were completed (information not available). Geophysical work was also reported (Non-confidential Assessment File No. 92236). The option was abandoned in 1972.

On August 11, 1980 the holder's name was changed to W. Bruce Dunlop Limited and then to Falconbridge Nickel Mines Limited (later renamed Falconbridge Limited). Jack 17, 20 were transferred back to W. Bruce Dunlop Limited in 1983.

REFERENCES

Bailes, A.H., 1971, Preliminary compilation of the geology of the Snow Lake - Flin Flon - Sherridon area; Manitoba Mines and Natural Resources, Mines Branch, Geological Paper 1/71, 27p.
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Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. 90246, 90247, 90256, 90257, 90258, 90259, 90261, 91661, 92236.
b Corporation Files; Manitoba Basin Mining Co., Limited; Mirado Nickel Mines Limited
b Mining Engineering Files; Manitoba Basin Mining Co., Limited;

Scoates, R.F.J., 1988, Metallogeny of mafic-ultramafic rocks, Flin Flon-Snow Lake (Project C.2.2.1); in Manitoba Energy and Mines, Minerals Division, Report of Field Activities 1988, p. 174.

Stanton, M.S., 1946, Tramping Lake (northern part) (Descriptive Notes and Map); Geological Survey of Canada, Paper 46-19.

Wright, J.F., 1938, Geology and mineral deposits of a part of northwest Manitoba; Geological Survey of Canada, Summary Report 1930, Part C, p. 72-73.

MAP REFERENCES

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Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/9 e,f, McClarty Lake, (Aeromagnetic Gradiometer), Scale 1:20 000; GSC Open File 937, Geological Survey of Canada (1982).

Maps C 20 352G, C 40 093G, Tramping Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

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Maps OF87-11-1A/OF87-11-1B, Tramping Lake area, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Preliminary Map 46-19, Tramping Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Stanton (1946), Geological Survey of Canada.

Map 906A, Tramping Lake area, (Geology), Scale 1:63 360 - Accompanying Memoir by Harrison (1949), Geological Survey of Canada.

MAP REFERENCES cont'd

Map, Jackfish Lake property, (Geology), Scale 1:2400 - Accompanying Non-confidential Assessment File No. 90246, Manitoba Mines Branch.
Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.
MDS Map No. 7, Tramping Lake (63K/9) area, (Mineral deposits and occurrences), Scale 1:50 000 - Accompanying Report by Ferreira and Fedikow (1990), Manitoba Energy and Mines.
Map, Reed Lake, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).
*Claim Map Series 63K/9 NW, Scale 1:31 680, Circa 1975, Mining Recording, Manitoba Mines Branch.

REMARKS

1. A magnetic "high" lies over the deposit.
2. Several holes drilled on the nearby Ni #2 (P 38534), #5 (P 38537), NiCu #5 (P 17086), NiCu #6 (P 17087) claims intersected disseminated to massive pyrrhotite and chalcopyrite (Non-confidential Assessment File Nos. 90256, 90257, 90260; Ferreira and Fedikow, 1990, p. 22-24). One drill hole, located on Ni 5, intersected 3 m (10 ft) of 2.72% Ni and 0.5% Cu (Northern Miner, September 6, 1956; Non-confidential Assessment File No. 90256). Maximum drill core assays were 3.58% Ni, 6.14% Cu.
3. In DDH 3 on Jack Pot 2 (P 10833), just north of Jack Pot 3-4, "21 m (core length) of moderate to near solid Fe-sulphide minerals and chalcopyrite also contains minor "native copper" and "galena" at the contact between mafic volcanic rocks and "quartzite" " (Ferreira and Fedikow, 1990, p.21; Non-confidential Assessment File No. 90259).

Comp./Rev.	RM	PA
By Date	11-75	09-90

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO.** 730

PRODUCT Nickel **N.T.S. AREA** 63K/9 NW **REF.** NI 3

NAME OF PROPERTY:
Cabin #9

OWNER OR OPERATOR AND ADDRESS
1990-Open

OBJECT LOCATED: Centre of Cabin #9 **MINING DIVISION** The Pas

Lat. 54° 40.6' Long. 100° 20.5' **UNCERTAINTY:** 200 m

Sec. Tp. 65, 66 R. 20 WPM

DESCRIPTION OF DEPOSIT

Medium-grained norite, gabbro, quartz-gabbro and amphibolite were mapped by Mirado Nickel Mines Limited.

Sulphide mineralization includes chalcopyrite, pyrrhotite, pentlandite and pyrite. Surface showings indicate a mineralized zone with an exposed length of at least 183 m (600 ft). Drilling indicates the zone to be at least 76.2 m (250 ft) wide (Non-confidential Assessment File No. 90249).

Two drill hole results are known for this claim. One was collared "in disseminated pyrrhotite and 58.5 consecutive feet (17.8 m) of core assayed 0.27% nickel". The other hole was collared "in rock containing approximately 3% sulphides. The first sixteen feet (4.9 m) of which assayed 0.45% nickel. Eighty consecutive feet (24.4 m) of core assayed 0.37% nickel". (Non-confidential Assessment File No. 90248, 90249).

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located just north of Reed Lake, about 2 km east of the south end of Jackfish Lake.

Surface work was reported to have been done by Manitoba Basin Mining Co., Limited in 1928-29.

In 1947 Walter Johnson recorded the Cabin #9 (P 16786) claim. Some blasting was done that year. Three diamond drill holes were drilled on the property in 1948 and returned maximum drill core assays of 0.45% Ni, 0.13% Cu, 0.34 g/t (0.01 oz/ton) Au, 0.017% Co. A total of 125.7 m (412.5 ft) of core was retrieved (Non-confidential Assessment File No. 90248). In 1949 a geological survey was conducted by A.L. Parres (Non-confidential Assessment File No. 90249). The claim was cancelled in 1950.

The area was restaked by A.L. Parres under Cabin #9 (P 22725) in 1950. A hole was drilled to a depth of 85.6 m (281 ft) that year (ddh 35; Non-confidential Assessment File No. 90256). Canadian Nickel Company Limited optioned the property in 1951, and carried out a magnetometer survey (Non-confidential Assessment File No. 90247). The option was abandoned in 1954.

Associated minerals or products of value
copper, gold, cobalt

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Stewart Staunton recorded the Egg 16 (P 38558) claim in 1956, and later transferred the claim to Mirado Nickel Mines Limited. An electromagnetic survey was done in 1956-1957 (Non-confidential Assessment File No. 90261). Detailed geological mapping of the property was carried out in 1957 (Non-confidential Assessment File No. 90246). The claim was grouped in 1957 and work done on other claims was applied to Egg 16. The claim was cancelled in 1958.

Albert Gunville recorded the Jack 65 (P 2073A) claim in 1962 and assigned it to Conwest Exploration Company Limited. The claim was cancelled in 1964.

In 1967 Hudson Bay Exploration and Development Company Limited (H.B.E.D.) did a helicopter EM and radiometric survey under Airborne Permit No. 67 (Non-confidential Assessment File No. 91661).

T.T. Daubert staked the EEL 101 (P 8620D) claim in 1968 and assigned it to H.B.E.D.. An electromagnetic survey was done in 1969. In 1970 the claim was grouped and diamond drilling work done in 1970-73 was applied to the claim grouping. In 1973 an airborne electromagnetic and magnetic survey was done by Granges Exploration AB under Airborne Permit No. 112 (Non-confidential Assessment File No. 92019). The claim was cancelled in 1974.

In 1986 Jac 5 (P 5670E) was staked by W. Bruce Dunlop Limited (N.P.L.). The claim was cancelled in 1988.

REFERENCES

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Manitoba Mines Branch:

a Non-confidential Assessment Files; File Nos. 90246, 90247, 90248, 90249, 90256, 90257, 90261, 91661, 92019, 92236.

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Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

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Map 906A, Tramping Lake area, (Geology), Scale 1:63 360 - Accompanying Memoir by Harrison (1949), Geological Survey of Canada.

Map, Jackfish Lake property, (Geology), Scale 1:2400 - Accompanying Non-confidential Assessment File No. 90246, Manitoba Mines Branch.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

MDS Map No. 7, Tramping Lake (63K/9) area, (Mineral deposits and occurrences), Scale 1:50 000 - Accompanying Report by Ferreira and Fedikow (1990), Manitoba Energy and Mines.

Map, Reed Lake, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).

Preliminary Map 1988 SL-3, Tramping Lake, (Surficial Geology and Aggregate Resources), Scale 1:50 000, by M. Mihychuk, Manitoba Mineral Resources Division.

*Claim Map Series 63K/9 NW, Scale 1:31 680, Circa 1975, Mining Recording, Manitoba Mines Branch.

NAME OF PROPERTY **FILE NO.** 730
Cabin #9 **N.T.S. AREA** 63K/9 NW **REF.** NI 3

REMARKS

1. On the nearby Cabin #2 claim one hole was drilled to a depth of 26 m (87 ft), and 8.4 m (27.5 ft) of core assayed 0.36% Ni and 0.16% Cu (Non-confidential Assessment File No. 90249). On the Egg 23 claim (just south of Cabin #2 and northwest of Egg 16) drill core assays of up to 0.76% Ni, 0.57% Cu were reported (Non-confidential Assessment File No. 90256). On Cabin #4, north of Cabin #9, a drill core assay of 0.39% Ni, 0.15% Cu over 6.7 m (22 ft) was reported (Non-confidential Assessment File No. 90248). The deposit flanks a magnetic "low".

Comp./Rev.	RM	PA
By Date	12-75	09-90

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO. 731**

PRODUCT Nickel **N.T.S. AREA** 63K/9 NW **REF.** NI 4

NAME OF PROPERTY:
Rusty 2 (Francoeur)

OWNER OR OPERATOR AND ADDRESS
1990-Open

OBJECT LOCATED: Drill hole **MINING DIVISION** The Pas

Lat. 54° 40.23' Long. 100° 18.32' **UNCERTAINTY:** 300 m

Sec. Tp. 65 R. 19 WPM

DESCRIPTION OF DEPOSIT

Disseminated to almost massive sulphides occur in Precambrian granite, intrusives, and possibly in granitized volcanic rocks. Pyrite and chalcopyrite were the major sulphides found by drilling. Disseminated pyrrhotite and minor molybdenite were also noted in the drill log (Non-confidential Assessment File No. 91850).

The axis of a gently folded, generally northeast to west trending anticline passes through the eastern part of the Raft-Rusty group.

HISTORY OF EXPLORATION AND DEVELOPMENT

The occurrence lies beneath northeastern Reed Lake, approximately 27 km southeast of the railway at Baldy and 8.5 km north of Provincial Road 391.

Rusty 2 (P 42057) was staked in 1956 by A. Gunville, and assigned to Francoeur Mines Limited. Magnetic and electromagnetic surveys were made during the winter of 1957. Several conductors were located beneath Reed Lake. The following summer three holes, with a total length of 148.4 m (487 ft), were drilled from a small island on Rusty 2. The highest assay from this drilling was 0.63% Ni and 0.52% Cu over 1.5 m (5 ft) between 3 and 4.6 m (10 and 15 ft) below the collar (Non-confidential Assessment File No. 91850). Francoeur Mines Limited 1957 Annual Report mentions an assay of 0.60% Ni and 0.42% Cu over 1.5 m (5 ft) (Francoeur Corporation File). This may be the same assay on Rusty 2, reported in the drill log. Reasons for the discrepancy are unknown. The claim was cancelled in 1960.

In 1967 Hudson Bay Exploration and Development Company Limited (H.B.E.D.) did a helicopter EM and radiometric survey under Airborne Permit No. 67 (Non-confidential Assessment File No. 91661).

In 1973 an airborne electromagnetic and magnetic survey was done by Granges Exploration AB under Airborne Permit No. 112 (Non-confidential Assessment File No. 92019).

Associated minerals or products of value
copper

NAME OF PROPERTY **FILE NO.** 731
Rusty 2 (Francoeur) **N.T.S. AREA** 63K/9 NW **REF.** NI 4

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

In 1974 CB 6218 was staked by J.J. Studer and assigned to Granges Exploration Aktiebolag. Horizontal loop electromagnetic surveys were carried out in 1974 and 1975 (Non-confidential Assessment File No. 91847). The claim block was cancelled in 1977.

More recent claim history is tabulated below:

Year	Claim	Owner
1980-1982	CB 10279 (Jack 10)	W. Bruce Dunlop Limited (N.P.L.)
1984-1986	Zoos 6 (W 47915)	Granges Exploration Aktiebolag

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Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. 91661, 91847, 91850, 92019.
b Corporation Files; Francoeur Mines Limited

Stanton, M.S., 1946, Tramping Lake (northern part) (Descriptive Notes and Map); Geological Survey of Canada, Paper 46-19.

MAP REFERENCES

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Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

MAP REFERENCES cont'd

Map 63K/9 e,f, McClarty Lake, (Aeromagnetic Gradiometer), Scale 1:20 000; GSC Open File 937, Geological Survey of Canada (1982).

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Comp./Rev.	SMH	PA
By Date	11-77	09-90

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO.** 1010

PRODUCT Zinc **N.T.S. AREA** 63K/9 NE **REF.** ZN 1

NAME OF PROPERTY:
CB 3827

OWNER OR OPERATOR AND ADDRESS
1990-Granges Inc.
P.O. Box 849
Flin Flon
Manitoba
R8A 1N6

OBJECT LOCATED: Drill hole R-74-8 **MINING DIVISION** The Pas

Lat. 54° 44.33'	Long. 100° 06.63'	**UNCERTAINTY:** 1000 m
Sec.	Tp. 66	R. 18 WPM

DESCRIPTION OF DEPOSIT

The occurrence lies just west of the Berry Creek Fault. Drill holes in this area intersected gabbro, porphyritic andesite, quartz-biotite-gneiss, chloritic gneiss (after andesite) and foliated grey-green dacite. Drill hole R-74-8 intersected serpentinite, dunite and sections of massive to near massive pyrrhotite, with minor chalcopyrite, sphalerite and pyrite. The 35.5 - 41.7 m (116.6 - 136.8 ft) section of core returned 0.23 to 0.74% Zn (Non-confidential Assessment File No. 92106). Up to 24.68 g/t (0.72 oz/ton) Ag was reported over 1.5 m.

HISTORY OF EXPLORATION AND DEVELOPMENT

The property is located 2.9 km north of Tramping Lake, 3.6 km west of Grass River, and 4.85 km northwest of Highway Lake.

In April 1954 Jac 33 (P 31022) was staked by Lawrence MacAuley and Jac 44 (P 31033) was staked by Cecil Smith. An electromagnetic survey of the Jac claims was done by Jay Kay Exploration Syndicate in the summer and fall of 1954 (Non-confidential Assessment File No. 90235). Jac 33, 44 were transferred to Douglas Banks later that year. A claim grouping was recorded in 1956 and work was reported under the grouping.

Eugene R. Sanford staked the Ant 98 (P 34826) claim in April 1955 and transferred it to Hudson Bay Exploration and Development Company Limited (H.B.E.D.) the next month. An electromagnetic survey of the Ant claims was done by H.B.E.D. in 1955-56 (Non-confidential Assessment File No. 90231). A claim grouping was recorded in 1957 and work was reported under the grouping.

In 1957 an airborne electromagnetic survey was done by Canadian Nickel Company Limited under Airborne Permit No. 19 (Non-confidential Assessment File No. 91624).

Associated minerals or products of value
Silver, nickel, gold, copper

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

In June 1964, G.R. Frazer staked Pen 363, 364 (P 2570B, 71B) over the area. A horizontal loop electromagnetic survey of the Pen claims was done by H.B.E.D. that summer (Non-confidential Assessment File No. 91947). The claim was transferred to H.B.E.D. in November 1964. It was cancelled in 1965.

CB 3827 was staked by George Grindle in 1971. In 1973 Straus Minerals did a Turam horizontal loop electromagnetic survey over the property (Non-confidential Assessment File No. 92174). That year Granges Exploration AB did an airborne electromagnetic survey over the area under Airborne Permit No. 112 (Non-confidential Assessment File No. 92019). Granges Exploration AB drilled one hole (DDH R-74-8) to a depth of 75.9 m (249 ft) in 1974 (Non-confidential Assessment File No. 92106). The best drill core assay that was reported was 0.74% Zn, 24.69 g/t (0.72 oz/ton) Ag, 0.12% Cu, 0.05% Ni, 0.06 g/t (0.002 oz/ton) Au over 1.5 m (5 ft) at a drilled depth of 35.5 m (116.6 ft). Two holes (R-76-55, 56) drilled on CB 5631 (adjacent to the north boundary of CB 3827) returned assays of up to 0.4% Zn (Non-confidential Assessment File No. 92107). (Approximately 880 m north, on CB 4230, DDH R75-50 returned 0.25% Zn over 0.3 m (1.1 ft), 0.27% Zn over 0.9 m (3.1 ft), 0.24% Zn over 1.2 m (3.8 ft) and up to 4.1 g/t (0.12 oz/ton) Ag (Non-confidential Assessment File No. 92173)). CB 3827 was cancelled in 1978.

H.B.E.D. staked CB 10547 (Pen 10547) in 1979. The claim block was cancelled in 1981.

In 1986 Granges Exploration Ltd. (later renamed Granges Inc.) staked Ber 8 (P 5840E) over the property.

REFERENCES

Bailes, A.H., 1971, Preliminary compilation of the geology of the Snow Lake - Flin Flon - Sherridon area; Manitoba Mines and Natural Resources, Mines Branch, Geological Paper 1/71, 27p.
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REFERENCES cont'd

Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. 90231, 90235, 90240, 91624, 91633, 91947, 92019, +92106, 92107, 92173, 92174.
Stanton, M.S., 1946, Tramping Lake (northern part) (Descriptive Notes and Map); Geological Survey of Canada, Paper 46-19.

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Map, Reed Lake, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).
Preliminary Map 1988 SL-3, Tramping Lake, (Surficial Geology and Aggregate Resources), Scale 1:50 000, by M. Mihychuk, Manitoba Mineral Resources Division.
Claim Map Series 63K/9 NE, Scale 1:31 680, Circa 1973, Mining Recording, Manitoba Mines Branch.

REMARKS

1. Approximately 5.8 km southwest, on CB 6245, core from DDH R75-43 assayed 0.25% Zn, 0.23% Cu, 2.05 g/t (0.06 oz/ton) Ag over 3 m (10 ft) at a drilled depth of 37.2 m (122 ft) (Non-confidential Assessment File No. 91633; Ferreira and Fedikow, 1990, p. 52-53).
2. Long intersections of sulphide mineralization were reported in drill core (DDH T-1, 2) from the southeast part of Tramping Lake, about 7.8 km south (Non-confidential Assessment File No. 90240).

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO.** 1011

PRODUCT Zinc **N.T.S. AREA** 63K/9 NW **REF.** ZN 2

NAME OF PROPERTY:
CB 10779

OWNER OR OPERATOR AND ADDRESS
1990-Open

OBJECT LOCATED: drill hole EEL 314 **MINING DIVISION** The Pas

Lat. 54° 42.1' **Long.** 100° 27.45' **UNCERTAINTY:** 400 m

Sec. **Tp.** 66 **R.** 20 WPM

DESCRIPTION OF DEPOSIT

The area is underlain by gabbro and diorite (Map 906A). A drill hole in this area intersected: argillaceous dacite tuff to tuffaceous argillite with disseminated and stringer pyrite; quartz-carbonate biotite argillite and graphitic argillite with disseminated pyrite and pyrrhotite; quartz diorite-granodiorite; dacite-andesite tuff; a "massive dark blue-grey fragmental rock" mineralized with disseminated and stringer pyrrhotite, pyrite, chalcopyrite and rare sphalerite; and rhyodacite tuff with 1-5% fuchsite bands and trace-1% pyrrhotite and pyrite bands (Non-confidential Assessment File No. 92776). A massive pyrite section assayed 1.3% Zn, 0.43% Cu, 3.77 g/t (0.11 oz/ton) Ag, 0.34 g/t (0.01 oz/ton) Au over 0.6 m (1.9 ft) at a drilled depth of 93 m (305.4 ft).

HISTORY OF EXPLORATION AND DEVELOPMENT

The occurrence is located at the north end of Reed Lake, approximately 5.25 km west of Jackfish Lake, and 13 km north of Provincial Highway 391.

The area was first staked as Java 1 (P 17435) by D. Finlayson in 1947. It was reopened for staking the following year.

In May 1955 Hudson Bay Exploration and Development Company Limited (H.B.E.D.) did a helicopter EM and radiometric survey under Airborne Permit No. 10 (Non-confidential Assessment File No. 91619). In September 1955, Hen 106 (P 36065) was staked and assigned a month later to H.B.E.D.. An electromagnetic survey was carried out in 1956. One hole (DDH 7) drilled on an adjacent claim (Hen 105), 150 m northwest, intersected sheared siliceous chloritic graphitic andesite with quartz-carbonate sections and several sections of near solid to solid pyrite, pyrrhotite and graphite (Non-confidential Assessment File No. 90252).

In 1961 the area was restaked as Reed 7 (P 87115) by Joseph A. Anderson. The claim was assigned to Canadian Nickel Company, Limited soon after. In February 1962, a claim grouping was recorded and diamond drilling was reported to have been done under this grouping (about 700 m north, DDH 19542 on Reed 3 intersected mineralized greywacke (Non-confidential Assessment File No. 91387)). The claim was cancelled in 1963.

Associated minerals or products of value
copper, silver, gold

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

In 1967 H.B.E.D. did a helicopter EM and radiometric survey under Airborne Permit No. 67 (Non-confidential Assessment File No. 91661). CB 403 was staked by Albert Stoltz in April 1969 and assigned to H.B.E.D. in July 1969. The claim block was cancelled in 1971.

In 1980 H.B.E.D. staked CB 10779 (Eel 10779) following the results of a 'recent' airborne EM survey. An Apex MaxMin II electromagnetic survey was carried out in 1982, and repeated again in 1984. One hole (EEL-314) was drilled to a depth of 125 m (410 ft) that year (Non-confidential Assessment File No. 92776).

In 1985 the northern part of the claim block was re-checked with a horizontal loop EM survey. That year, about 700 m north of DDH EEL-314, another hole (EEL-325) was drilled to a depth of 209 m (685.7 ft). The hole intersected quartz-feldspar porphyry, and argillite with pyrite, pyrrhotite and quartz-carbonate veins. Near solid pyrite and 5-20% stringer pyrite and pyrrhotite was reported in the 124 - 161 m (406.5 - 528 ft) section of core. Up to 0.3% Zn, 0.12% Cu was reported in drill core assays. The claim block was cancelled in 1987.

In 1988 Sac 1 (P 7310E) was staked by Robert Polh. The claim was cancelled in May 1990.

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MDS Map No. 7, Tramping Lake (63K/9) area, (Mineral deposits and occurrences), Scale 1:50 000 - Accompanying Report by Ferreira and Fedikow (1990), Manitoba Energy and Mines.
Map, Reed Lake, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).
Claim Map Series 63K/9 NW, Scale 1:31 680, Circa 1981, Mining Recording, Manitoba Mines Branch.

REMARKS

1. A gold occurrence is indicated 750 m south (Map 906A).
2. Approximately 1.3-2.1 km north, sphalerite was reported in drill core from CB 10776 (DDH EEL-311, 312; Non-confidential Assessment File No. 92776).
3. About 3.9 km northwest, abundant pyrrhotite was intersected in a 227 m (747 ft) deep drill hole (DDH EEL-305) drilled on CB 10771 (Non-confidential Assessment File No. 92570; Ferreira and Fedikow, 1990, p. 83-84).

Comp./Rev. PA
By Date 09-90

PRODUCT Zinc **N.T.S. AREA** 63K/9 NE **REF.** ZN 3

NAME OF PROPERTY:
CB 5668

OWNER OR OPERATOR AND ADDRESS
1990--
Granges Inc. (80% interest)
2300 - 885 W. Georgia St.
Vancouver, British Columbia
V6C 3E8

Alfred C. Borgstrom (20% interest)
129 Green St.
Flin Flon, Manitoba
R8A 1M5

OBJECT LOCATED: Location #45
(MDS Map No. 7)

MINING DIVISION The Pas

Lat. 54° 43.75' Long. 100° 13.06' UNCERTAINTY: 250 m

Sec. Tp. 66 R. 19WPM

DESCRIPTION OF DEPOSIT

"The area is underlain by granite and granodiorite, flanked to the north by mafic volcanic rocks, and to the east by 'quartz-eye' granite and porphyry....DDH R-22 intersected dacite, siliceous garnetiferous chlorite-biotite gneiss and quartz-sericite±biotite gneiss. DDH R73-81 intersected a suite of altered fragmental, reworked and massive, intermediate to mafic volcanic rocks and minor diorite. DDH R-19 intersected interlayered dacite, altered mafic volcanic flows and tuff, and siliceous chlorite-garnet-biotite±sericite gneiss."

"DDH R-22 intersected 18.9 m of garnetiferous quartz-biotite-sericite gneiss with minor to moderate pyrrhotite, minor to solid pyrite, up to 4% chalcopyrite, trace to near solid sphalerite, trace galena, and quartz veins. The part of this intersection that contains near solid sphalerite is 0.1 m in core length. In DDH R73-81, 4.5 m of quartz-sericite schist, probably derived from a reworked tuff breccia, contains moderate to near solid pyrrhotite and pyrite with trace to 1% chalcopyrite, minor sphalerite and trace galena. In DDH R-19, 10.0 m of minor to solid pyrrhotite, minor to moderate pyrite, trace to 1% chalcopyrite, traces of sphalerite and galena, and minor quartz veinlets are hosted by quartz-sericite-biotite-garnet gneiss. The mineralization underlies coarse grained quartz-garnet-biotite gneiss. Further downhole, a 3.3 m unit of quartz-sericite-garnet-biotite gneiss contains minor to near solid pyrite, minor to moderate pyrrhotite and trace to 1% chalcopyrite...." (Ferreira and Fedikow, 1990).

HISTORY OF EXPLORATION AND DEVELOPMENT

The property is located 5.25 km east of Halfway Lake and 2.7 km south of Morgan Lake.

Associated minerals or products of value
copper, lead, silver, gold

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

An electromagnetic survey was done by Selco Exploration Company Limited just north of this area on the Ben claim group in 1957 (Non-confidential Assessment File No. 90232).

In 1973 Alfred C. Borgstrom staked CB 5668. That year Granges Exploration Aktiebolag did an airborne electromagnetic/magnetic survey in the area as part of a larger airborne electromagnetic survey flown under Airborne Permit No. 112 (Non-confidential Assessment File Nos. 92019, 91963). The claim block was grouped with CB 5667 and optioned to Granges, which carried out a HLEM survey and a 9 hole diamond drilling program in 1974 (Non-confidential Assessment File No. 91964). Drilling was reported to have been done in 1975-1978.

The following results were reported:
"Drill core assayed 0.01-1.18% Cu, 0.03-6.81% Zn, 0.03-0.66% Pb, 0.5-14.5 g/t Ag and 0.2-57.3 g/t Au. Significant assays from drill logs include:
(1) DDH R-22: 0.45% Cu, 0.13% Zn, 15.1 g/t Ag and 2.3 g/t Au over 5.7 m, including 1.18% Cu, 0.08% Zn, 12.7 g/t Ag and 1.2 g/t Au over 1.3 m;
(2) DDH R73-81: 0.38% Cu, 0.20% Zn, 9.6 g/t Ag and 0.6 g/t Au over 5.0 m, including 0.53% Cu, 1.04% Zn, 10.5 g/t Ag and 0.5 g/t Au over 0.5 m;
(3) DDH R73-81: 0.03% Cu, 1.80% Zn, 8.0 g/t Ag and 0.15 g/t Au over 1.1 m; and
(4) DDH R-19: 0.07% Cu, 2.54% Zn, 0.66% Pb, 2.6 g/t Ag and 1.7 g/t Au over 0.6 m." (Ferreira and Fedikow, 1990).

In 1983 Granges Exploration Aktiebolag obtained an 80% interest in the claim. This was transferred to Granges Exploration Ltd. in 1986. (In 1985 Manitoba Mineral Resources Ltd. staked claims on either side of CB 5668, but the claims were cancelled in 1987). Work was done from 1980 to 1987. Three years work was applied in 1988. In 1989 Granges Exploration Ltd. was renamed Granges Inc.

REFERENCES

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Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 5.

NAME OF PROPERTY CB 5668 **N.T.S. AREA** 63K/9 NE **FILE NO.** 1012 **REF.** ZN 3

REFERENCES cont'd

Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. 90232, 91963, 91964, 92019.
Stanton, M.S., 1946, Tramping Lake (northern part) (Descriptive Notes and Map); Geological Survey of Canada, Paper 46-19.

MAP REFERENCES

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Map 2465G, Tramping Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.
Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).
Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).
Map 63K/9 g,h, McClarty Lake, (Aeromagnetic Gradiometer), Scale 1:20 000; GSC Open File 937, Geological Survey of Canada (1982).
Maps C 20 352G, C 40 093G, Tramping Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).
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Maps OF87-11-1A/OF87-11-1B, Tramping Lake area, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.
Map 1801, Reed and Wekusko Lakes region, (Geology), Scale 1:126 720 - Accompanying Memoir by Alcock (1920), Geological Survey of Canada.
Preliminary Map 46-19, Tramping Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Stanton (1946), Geological Survey of Canada.
Map 906A, Tramping Lake area, (Geology), Scale 1:63 360 - Accompanying Memoir by Harrison (1949), Geological Survey of Canada.
Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.
#MDS Map No. 7, Tramping Lake (63K/9) area, (Mineral deposits and occurrences), Scale 1:50 000 - Accompanying Report by Ferreira and Fedikow (1990), Manitoba Energy and Mines.
Map, Reed Lake, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).
Preliminary Map 1988 SL-3, Tramping Lake, (Surficial Geology and Aggregate Resources), Scale 1:50 000, by M. Mihychuk, Manitoba Mineral Resources Division.
Claim Map Series 63K/9 NE, Scale 1:31 680, Circa 1973, Mining Recording, Manitoba Mines Branch.

Comp./Rev. PA
By Date 10-90

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO. 736**

PRODUCT Copper **N.T.S. AREA** 63K/10 NE **REF.** CU 1

NAME OF PROPERTY:
Reed Lake (CB 159)
(Fourmile Island Copper)

OWNER OR OPERATOR AND ADDRESS
1990- Hudson Bay Exploration
and Development Company
Limited
P.O. Box 1500
Flin Flon, Manitoba
R8A 1N9

OBJECT LOCATED: Deposit **MINING DIVISION** The Pas

Lat. 54° 38.22' Long. 100° 32.93' **UNCERTAINTY:** 700 m

Sec. Tp. 65 R. 21 WPM

DESCRIPTION OF DEPOSIT

A copper deposit with minor zinc mineralization occurs in felsic Amisk volcanics beneath Reed Lake. The deposit does not outcrop on surface.

HISTORY OF EXPLORATION AND DEVELOPMENT

A copper deposit occurs a few hundred metres north of the western part of Fourmile Island in Reed Lake. Provincial Road 391 is approximately 6.2 km south and Cranberry Portage is 55 km west.

The deposit was discovered about 1970. Earlier staking history is tabulated below.

Year	Activity
1928	Victoria (43970) staked by J. Wylie
1931	Cancelled
1939	J.M. Holloway visited the area and did some reconnaissance mapping
1945	New Hope 4, 5, 9 (P 8686, 8687, 8691) staked by A. Hedin
1947	Assigned to Middleground Mining Company Limited
1949	Cancelled
1955	Hudson Bay Exploration and Development Company Limited (H.B.E.D.) did an airborne EM and radiometric survey over the Reed-File Lakes area
1956	Parrex Syndicate did airborne geophysical (EM, Mag, radiometric) surveys over the region
1967-68	H.B.E.D. did a helicopter EM and radiometric survey under Airborne Permit No. 67 (Non-confidential Assessment File No. 91661).
1968	CB 159 staked by A.F. Olesen
1969	Assigned to H.B.E.D.
1970-1	Electromagnetic and Turam surveys reported
1970-4	Diamond drilling reported; drilling indicated 515 000 tonnes (568 000 tons) of 2.0% Cu to 244 m (800 ft) (Northern Miner, April 30, 1970)

Associated minerals or products of value
zinc.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

The results of the geophysical surveys and drilling are confidential. Hudson Bay Mining and Smelting Company, Limited Annual Reports mention results of the drilling as follows:

Annual Report	Tonnage	% Cu	Remarks
1970	714 000 tonnes (787 000 tons)	2.0	to 304.8 m (1000 ft); indicated by drilling in April 1970
1971	1 036 000 tonnes (1 142 000 tons)	2.18	to 419.1 m (1375 ft); indicated by drilling
1973	1 361 000 tonnes (1 500 000 tons)	2.09	to 548.6 m (1800 ft) with 10% dilution; uneconomic at present

Esposito (1986) reported a tonnage of 1 035 794 tonnes of 2.18% Cu.

Diamond drilling was carried out in 1975-1980, 1983, 1985. A geological survey was done in 1982. Ground geophysical surveys were done in 1988-89.

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Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. 91661.
b Corporation Files; Hudson Bay Mining and Smelting Company, Limited (Annual Reports 1970-1976)
c Unpublished Information Files; 63K/9, 10; 63K/10; 63K/10-15

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Map 2461G, Iskwasum Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

MAP REFERENCES cont'd

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Map 63K/10g,h, McClarty Lake, (Aeromagnetic Gradiometer), Scale 1:20 000; GSC Open File 937, Geological Survey of Canada (1982).

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Map 1801, Reed and Wekusko Lakes region, (Geology), Scale 1:126 720 - Accompanying Memoir by Alcock (1920), Geological Survey of Canada.

*Map 66-3, Iskwasum (Geology), Scale 1:63 360 - Accompanying Publication by Rousell (1970), Manitoba Mines Branch.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

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Map, Reed Lake, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).

Claim Map Series 63K/10NE, Scale 1:31 680, Circa 1978, Mining Recording, Manitoba Mines Branch.

REMARKS

Deposit located by G. Gale.

Disseminated chalcopyrite and sphalerite were reported from the "Bartlett-Carr Property....on a large island in a group of islands..." 12.9 km south of the portage on Reed Lake (Fraser, 1928). The exact location of this showing is unknown.

Comp./Rev.	SMH	PA
By Date	01-78	08-90

PRODUCT Copper **N.T.S. AREA** 63K/10 NE **REF.** CU 2

NAME OF PROPERTY:
Rail Lake

OWNER OR OPERATOR AND ADDRESS
1990- Hudson Bay Mining and
Smelting Co., Limited
P.O. Box 1500
Flin Flon, Manitoba
R8A 1N9

OBJECT LOCATED: Centre of Hen #436 M.C. **MINING DIVISION** The Pas

Lat. 54° 44.9'	Long. 100° 35.5'	UNCERTAINTY: 200 m
Sec.	Tp. 66	R. 21 WPM

DESCRIPTION OF DEPOSIT

The Rail Lake zone is reported to contain 295 000 tonnes (325 000 tons) of 3.0% Cu and 0.7% Zn to 304.8 m (1000 ft) (Canadian Mines Handbook, 1974-75; Northern Miner, April 30, 1970).

Detailed geological data is not available but according to Bailes (1971) the deposit is located at the edge of a zone of granitized sedimentary rocks. A body of pillowed Amisk andesite lies adjacent to this granitized mass.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located 3000 m west of the north end of Krug Lake.

G.V. Black recorded Pine #3, 5, 6 (P 30870, 2, 3) over the deposit in 1954. The claims were cancelled a year later.

In 1955 Hudson Bay Exploration and Development Company Limited (H.B.E.D.) did an airborne EM and radiometric survey over the Reed-File Lakes area under Airborne Permit No. 10 (Non-confidential Assessment File No. 91619).

Gerry Gangne recorded the Hen #430-2, 435-7 (P 41494-496, 41499-501) claims in 1956. Later that year the claims were assigned to H.B.E.D. The claims were included under several grouping certificates.

A geophysical survey was recorded in 1957 and in 1958 a total of 1158.8 m (3802 ft) of diamond drilling was conducted on Hen #431, 441 and 446.

The claims were transferred to the Hudson Bay Mining and Smelting Co., Limited (HBMS) in 1960. A 21 year lease was issued to HBMS in 1961. H.B.E.D. did a turam survey in 1966. In 1975 ten year Explored Area Lease No. 5 was issued to HBMS.

Walford and Franklin (1982) reported 453 300 tonnes of 2.85% Cu, 0.7% Zn for the deposit. Esposito (1986) reported 294 775 tonnes of 3.0% Cu and 0.7% Zn.

Associated minerals or products of value
zinc.

REFERENCES

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Manitoba Mines Branch:
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Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

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Map 63K/10g,h, McClarty Lake, (Aeromagnetic Gradiometer), Scale 1:20 000; GSC Open File 937, Geological Survey of Canada (1982).
Maps C 20 341G, C 40 082G, Iskwasum Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).
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Map 1072A, Elbow Lake, (Geology), Scale 1:63 360 - Accompanying Memoir by McGlynn (1959), Geological Survey of Canada.
Map 66-3, Iskwasum (Geology), Scale 1:63 360 - Accompanying Publication by Rousell (1970), Manitoba Mines Branch.
Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.
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Map 63K, Cormorant Lake, (Geology map and notes), Scale 1:250 000, by Taiga Consultants Ltd.; GSC Open File 1381, Geological Survey of Canada (1986).
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#Claim Map Series 63K/10NE, Scale 1:31 680, Circa 1975, Mining Recording, Manitoba Mines Branch.

REMARKS

The deposit is located adjacent to a magnetic high.

Comp./Rev.	RM	PA
By Date	12-75	08-90

PRODUCT Zinc **N.T.S. AREA** 63K/10 NE **REF.** ZN 1

NAME OF PROPERTY:
CB 9461

OWNER OR OPERATOR AND ADDRESS
1990- Hudson Bay Exploration
and Development Company
Limited
P.O. Box 1500
Flin Flon, Manitoba
R8A 1N9

OBJECT LOCATED: Drill hole EEL 316 **MINING DIVISION** The Pas

Lat. 54° 38.83' Long. 100° 41.8' UNCERTAINTY: 400 m

Sec. Tp. 65 R. 22 WPM

DESCRIPTION OF DEPOSIT

Diamond drilling intersected sandy argillaceous andesite tuffs and dacitic tuffs with quartz-carbonate veins and stringers, andesite tuffs and flows, and granitic rocks. Pyrrhotite, chalcopyrite, and pyrite are found locally as disseminations and stringers in andesitic and dacitic tuff. One hole (ddh EEL 316) intersected pyrrhotite-pyrite-sphalerite mineralization in sheared dacitic andesite and dacitic tuff over 4.6 m (15 ft) (Non-confidential Assessment File No. 92600).

HISTORY OF EXPLORATION AND DEVELOPMENT

The property is located 300 m west and 650 m north of Grass River, 2.5 km east of Loucks Lake and 4 km west of Reed Lake.

The area was first staked as Hen 749 (42461) about 1957. An electromagnetic survey was done by Hudson Bay Mining and Smelting Company, Limited in 1957 (Non-confidential Assessment File No. 90250). (A conductor east of the river was drilled and intersections of well-mineralized to near solid pyrrhotite, and trace pyrite, chalcopyrite, and sphalerite were reported). The claim was cancelled about 1960.

CB 2822 was staked by Glenn Hogarth in 1970 and was assigned to Hudson Bay Exploration and Development Company Limited (H.B.E.D.) soon after. In 1972 H.B.E.D. did a Turam EM and magnetic survey (Non-confidential Assessment File Nos. 91818, 90263). The claim block was cancelled in 1977.

H.B.E.D. staked CB 9461 (Eel 9461) in 1979. An airborne EM and magnetic survey was done over the region by Canadian Nickel Company Limited in 1980 (Non-confidential Assessment File No. 92472). An Apex MaxMin II horizontal loop EM survey was done by Geosearch Consultants (Man.) for H.B.E.D. in 1982.

In 1983 a hole (ddh EEL 306) was drilled to a depth of 114.6 m (376 ft) (Non-confidential Assessment File No. 92594). The best assay was 3.8% Zn, 1.07% Cu, 14.39 g/t (0.42 oz/ton) Ag, 1.37 g/t (0.04 oz/ton) Au for the 100.5 - 100.7 m (329.8 - 330.3 ft) section of core which consisted of dacitic tuff (with quartz veins) mineralized with near solid pyrrhotite, and some pyrite and chalcopyrite.

Associated minerals or products of value
copper, gold, silver.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

In 1984 another hole (ddh EEL 316) was drilled to a depth of 124 m (407 ft) (Non-confidential Assessment File No. 92600). The 113 - 113.4 m (371 - 372.2 ft) section of core contained dacitic tuff with quartz and quartz-carbonate veins, 25-30% pyrrhotite, 5% pyrite and assayed 2.5% Zn, 0.27% Cu, trace Au, Ag. Sphalerite stringers were reported at drilled depths of 109.7 m (360 ft) and 113.6 m (372.8 ft).

H.B.E.D. restaked the area as Eel 4241 (P 4241E) in 1985.

REFERENCES

Alcock, F.J., 1920, The Reed-Wekusko Map-area, northern Manitoba; Geological Survey of Canada, Memoir No. 119, 47p.
Bailes, A.H., 1971, Preliminary compilation of the geology of the Snow Lake - Flin Flon - Sherridon area; Manitoba Mines and Natural Resources, Mines Branch, Geological Paper 1/71, 27p.
Hosain, I.T., 1984, Interpretation of airborne magnetic gradiometer surveys of the area south of the Flin Flon - Snow Lake belt (parts of NTS 63K and 63J); Manitoba Energy and Mines, Mineral Resources Division, Mines Branch, Open File Report OF84-2, 26p.
Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 12, 15.
Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. 90250, 90263, 91818, 92472, 92594, 92600.
Rousell, D.H., 1970, Geology of the Iskwasum Lake area (East Half); Manitoba Mines Branch, Publication 66-3, 26p.
Stockwell, C.H., 1935, Gold deposits of Elbow - Morton area, Manitoba; Geological Survey of Canada, Memoir No. 186, 74p.

MAP REFERENCES

Map 63K/10, Iskwasum Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa, Department of Energy, Mines and Resources (1981).
Map 2461G, Iskwasum Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.
Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).
Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).
Map 63K/10g,h, McClarty Lake, (Aeromagnetic Gradiometer), Scale 1:20 000; GSC Open File 937, Geological Survey of Canada (1982).
Maps C 20 341G, C 40 082G, Iskwasum Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

MAP REFERENCES cont'd

Map OF84-2, South of the Flin Flon - Snow Lake area, (Airborne gradiometer interpretation), Scale 1:100 000 - Accompanying Report by Hosain (1984), Manitoba Mineral Resources Division.

Maps OF87-11-2A/OF87-11-2B, Iskwasum Lake area, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 1801, Reed and Wekusko Lakes region, (Geology), Scale 1:126 720 - Accompanying Memoir by Alcock (1920), Geological Survey of Canada.

Map 321A, Elbow-Morton area, (Geology), Scale 1:126 720 - Accompanying Memoir by Stockwell (1935), Geological Survey of Canada.

Map 66-3, Iskwasum Lake (East Half), (Geology), Scale 1:63 360 - Accompanying Publication by Rousell (1970), Manitoba Mines Branch.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Map 63K, Cormorant Lake, (Geology map and notes), Scale 1:250 000, by Taiga Consultants Ltd.; GSC Open File 1381, Geological Survey of Canada (1986).

Map, Reed Lake, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).

*Claim Map Series 63K/10NE, Scale 1:31 680, Circa 1984, Mining Recording, Manitoba Mines Branch.

REMARKS

1. About 6.1 km south (just south of Provincial Road No. 391), 1-2% sphalerite blebs in drill core and drill core assays of up to 0.4% Zn were reported (Non-confidential Assessment File Nos. 92729, 92725).
2. About 7.4 km west, a drill core assay of trace Ni over 15 m was reported (Non-confidential Assessment File No. 90280).
3. At Barb Lake, 9.8 km northwest, a drill core assay of 0.41% Cu, 0.13% Ni over 3 m was reported (Non-confidential Assessment File No. 92849).
4. About 7.3 km northeast, drill core assays of up to 0.78% Cu, 0.2% Zn were reported (ddh EEL 288, 289 in Non-confidential Assessment File No. 92693; ddh H58 in Non-confidential Assessment File No. 90250).

Comp./Rev.	PA
By Date	08-90

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO. 1014**

PRODUCT Zinc **N.T.S. AREA** 63K/10 NE **REF.** ZN 2

NAME OF PROPERTY:
Krug Lake (CB 4262)

OWNER OR OPERATOR AND ADDRESS
1990-Manitoba Mineral Resources Ltd.
603 - 491 Portage Avenue
Winnipeg, Manitoba
R3B 2E4

OBJECT LOCATED: Drill hole KR-75-7 **MINING DIVISION** The Pas

Lat. 54° 42.8' Long. 100° 33.77' UNCERTAINTY: 350 m

Sec. Tp. 66 R. 21 WPM

DESCRIPTION OF DEPOSIT

The area is underlain by chlorite schist (Map 66-3). Drill hole KR-75-7 intersected rhyodacite (locally mineralized with pyrite, graphite, trace chalcopyrite and pyrrhotite) and andesite.

HISTORY OF EXPLORATION AND DEVELOPMENT

The property is located near the west-central part of Krug Lake, northwest of Reed Lake.

In 1955 Hudson Bay Exploration and Development Company Limited (H.B.E.D.) did an airborne EM and radiometric survey under Airborne Permit No. 10 (Non-confidential Assessment File No. 91619). The area was staked as Hen 344 (42386) around 1957. A horizontal loop electromagnetic survey was carried out by H.B.E.D. that year (Non-confidential Assessment File No. 90250). The claim was cancelled around 1963.

A.L. Parres staked CB 4262 in 1972. In 1974 an airborne EM/Mag survey was carried out by Questor Surveys Limited for Granges Exploration Aktiebolag which had an option on the claim. Results indicated a conductor at depth (Non-confidential Assessment File No. 92352). Granges did a horizontal loop electromagnetic survey and drilled a hole (KR-75-7) to a depth of 74.9 m (246 ft) in 1975. The best drill core assay was 1.56% Zn, 0.04% Ni, 0.34% Cu over 0.4 m (1.2 ft) at a depth of 66.8 m (219 ft) (Non-confidential Assessment File No. 92351). Another hole (KR-75-5) drilled about 500 m east in Krug Lake, intersected 0.32% Zn, 0.11% Cu over 0.7 m (2.4 ft) at a depth of 41.8 m (137.4 ft). The claim block was cancelled in 1981.

In 1985 Krug 5 (P 8725E) was staked by I. Bjornson for Manitoba Mineral Resources Ltd.

Associated minerals or products of value
copper, nickel.

REFERENCES

Alcock, F.J., 1920, The Reed-Wekusko Map-area, northern Manitoba; Geological Survey of Canada, Memoir No. 119, 47p.

Bailes, A.H., 1971, Preliminary compilation of the geology of the Snow Lake - Flin Flon - Sherridon area; Manitoba Mines and Natural Resources, Mines Branch, Geological Paper 1/71, 27p.

Gale, G.H. and Koo, J., 1977, Evaluation of massive sulphide environments; in Canada Department of Energy, Mines and Resources, Manitoba Department of Mines, Resources and Environmental Management, NREP 2nd Annual Report 1976-1977, Open File Report 77-7, p. 50-51.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 12-13.

Manitoba Mines Branch:

a Non-confidential Assessment Files; File Nos. 90250, 91619, 92351, 92352.

Rousell, D.H., 1970, Geology of the Iskwasum Lake area (East Half); Manitoba Mines Branch, Publication 66-3, 26p.

Stockwell, C.H., 1935, Gold deposits of Elbow - Morton area, Manitoba; Geological Survey of Canada, Memoir No. 186, 74p.

MAP REFERENCES

Map 63K/10, Iskwasum Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa, Department of Energy, Mines and Resources (1981).

Map 2461G, Iskwasum Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/10g,h, McClarty Lake, (Aeromagnetic Gradiometer), Scale 1:20 000; GSC Open File 937, Geological Survey of Canada (1982).

Maps C 20 341G, C 40 082G, Iskwasum Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

*Maps OF87-11-2A/OF87-11-2B, Iskwasum Lake area, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 1801, Reed and Wekusko Lakes region, (Geology), Scale 1:126 720 - Accompanying Memoir by Alcock (1920), Geological Survey of Canada.

Map 321A, Elbow-Morton area, (Geology), Scale 1:126 720 - Accompanying Memoir by Stockwell (1935), Geological Survey of Canada.

Map 66-3, Iskwasum Lake (East Half), (Geology), Scale 1:63 360 - Accompanying Publication by Rousell (1970), Manitoba Mines Branch.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Map 63K, Cormorant Lake, (Geology map and notes), Scale 1:250 000, by Taiga Consultants Ltd.; GSC Open File 1381, Geological Survey of Canada (1986).

Map, Reed Lake, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).

Claim Map Series 63K/10NE, Scale 1:31 680, Circa 1975, Mining Recording, Manitoba Mines Branch.

REMARKS

Several holes were drilled at the southeast end of Krug Lake near the contact between gabbroic rocks and chlorite schist: drill core from the southeast part of Krug Lake, returned assays of 0.41% Zn, 0.03% Ni, 0.09% Cu over 2 m; 0.74% Zn, 0.06% Ni, 0.16% Cu over 0.4 m (Non-confidential Assessment File No. 92351, 92352); near the south end of Krug Lake, on the Eel 79 claim, an assay of 1.4% Zn was reported over 0.7 m (Non-confidential Assessment File No. 90268).

Comp./Rev.	PA
By Date	08-90

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO. 1015**

PRODUCT Zinc **N.T.S. AREA** 63K/10 NE **REF.** ZN 3

NAME OF PROPERTY:
CB 2896

OWNER OR OPERATOR AND ADDRESS
1990-Manitoba Mineral Resources Ltd.
603 - 491 Portage Avenue
Winnipeg, Manitoba
R3B 2E4

OBJECT LOCATED: Drill hole No. 9 **MINING DIVISION** The Pas

Lat. 54° 40.96' Long. 100° 33.03' UNCERTAINTY: 500 m

Sec. Tp. 66 R. 21 WPM

DESCRIPTION OF DEPOSIT

The occurrence is found near the assumed contact between gabbro, minor meta-diorite, anorthosite, pyroxenite and chlorite schist (Map 66-3). Diamond drilling intersected dacite, rhyodacite, diorite, andesite, rhyolite, and feldspar porphyry with disseminated pyrrhotite. Intersections of pyrite and pyrrhotite zones with minor chalcopyrite and sphalerite (and/or marmatite) were also reported (e.g. 100.3 - 118.8 m (329-390 ft) section of core in ddh 9; 173.3 - 175.9 m (568.5-577 ft) section in ddh 6) (Non-confidential Assessment File No. 92736).

HISTORY OF EXPLORATION AND DEVELOPMENT

The property is located 1.4 km west of a large island in the northwest part of Reed Lake, 1.8 km southeast of Krug Lake and about 5.5 km north of Fourmile Island in Reed Lake.

The area was first staked around 1930 under the Gold Elbow A, C (File Nos. 203790, 788) claims.

In 1955 Hudson Bay Exploration and Development Company Limited (H.B.E.D.) did an airborne EM and radiometric survey under Airborne Permit No. 10 (Non-confidential Assessment File No. 91619). In 1958 R.A. Forgrave staked Egg 7, 9 (P 69872, 74) and transferred the claims to H.B.E.D. soon after. The claims were cancelled around 1960.

In 1967 H.B.E.D. did a helicopter EM and radiometric survey under Airborne Permit No. 67 (Non-confidential Assessment File No. 91661).

CB 2896 was staked by William Jamen in 1970. In 1971 a turam horizontal loop electromagnetic survey was done by Tri-J-Mineral Surveys Ltd. for Straus Exploration Inc. (Non-confidential Assessment File No. 92737). This was followed by an EM-17 horizontal loop electromagnetic survey in 1972 (Non-confidential Assessment File No. 92735). That year four holes, totalling 740.4 m were drilled to test an EM conductor (Non-confidential Assessment File No. 92736). The drilling report was submitted by A.L. Parres.

Associated minerals or products of value
copper, silver, gold, cobalt, nickel.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

The best assays that were reported are summarized as follows:

ddh 9: 103.6 - 116.4 m (340-382 ft) section assayed 0.02-0.13% Cu, tr-6.17 g/t (0.18 oz/ton) Ag, 0.22-0.56% Zn. Maximum assays were 0.48% for Cu, 0.64% for Zn, and 8.23 g/t (0.24 oz/ton) Ag, with trace Co, Mo, Ni.

ddh 15: 96.2 - 104.5 m (315.5 - 343 ft) section assayed 0.05-0.1% Cu, 1.37-2.06 g/t (0.04-0.06 oz/ton) Ag, 0.16-0.41% Zn, trace-0.34 g/t (0.01 oz/ton) Au.

ddh 6: maximum assays were 0.7% Zn, 0.16% Cu, 0.02% Co, trace Ni, 3.43 g/t (0.1 oz/ton) Ag, 0.69 g/t (0.02 oz/ton) Au.

In June 1980 the claim block was cancelled but a relief from loss of rights was granted the following month. The holder's name changed to H.B.E.D. in December 1980 . In 1981 an airborne EM-30 survey was flown by H.B.E.D. in a north-south direction. An Apex MaxMin II horizontal loop electromagnetic survey was carried out the following year (Non-confidential Assessment File No. 92738). The claim block was transferred back to William Jamen in March 1984 . CB 2896 was cancelled in June 1987.

That month, Krug 25 (P 8810E) was staked by Ingi Bjornson for Manitoba Mineral Resources Ltd.

REFERENCES

Bailes, A.H., 1971, Preliminary compilation of the geology of the Snow Lake - Flin Flon - Sherridon area; Manitoba Mines and Natural Resources, Mines Branch, Geological Paper 1/71, 27p.
Gale, G.H. and Koo, J., 1977, Evaluation of massive sulphide environments; in Canada Department of Energy, Mines and Resources, Manitoba Department of Mines, Resources and Environmental Management, NREP 2nd Annual Report 1976-1977, Open File Report 77-7, p. 50-51.
Gale, G.H., Koo, J., Solkoski, L. and Southard, G., 1976, Evaluation of massive sulphide environments; in Canada Department of Energy, Mines and Resources, Manitoba Department of Mines, Resources and Environmental Management, NREP 1st Annual Report, Open File Report 77/1, p. 47-49.
Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 13-14.
Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. 91619, 91661, 92735, 92736, 92737, 92738.
Rousell, D.H., 1970, Geology of the Iskwasum Lake area (East Half); Manitoba Mines Branch, Publication 66-3, 26p.
Stockwell, C.H., 1935, Gold deposits of Elbow - Morton area, Manitoba; Geological Survey of Canada, Memoir No. 186, p. 14-15.

NAME OF PROPERTY **FILE NO. 1015**
CB 2896 **N.T.S. AREA** 63K/10 NE **REF.** ZN 3

MAP REFERENCES

Map 63K/10, Iskwasum Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa, Department of Energy, Mines and Resources (1981).
Map 2461G, Iskwasum Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.
Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).
Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).
Map 63K/10g,h, McClarty Lake, (Aeromagnetic Gradiometer), Scale 1:20 000; GSC Open File 937, Geological Survey of Canada (1982).
Maps C 20 341G, C 40 082G, Iskwasum Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).
*Maps OF87-11-2A/OF87-11-2B, Iskwasum Lake area, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.
Map 321A, Elbow-Morton area, (Geology), Scale 1:126 720 - Accompanying Memoir by Stockwell (1935), Geological Survey of Canada.
Map 66-3, Iskwasum Lake (East Half), (Geology), Scale 1:63 360 - Accompanying Publication by Rousell (1970), Manitoba Mines Branch.
Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.
Map 63K, Cormorant Lake, (Geology map and notes), Scale 1:250 000, by Taiga Consultants Ltd.; GSC Open File 1381, Geological Survey of Canada (1986).
Map, Reed Lake, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).
Claim Map Series 63K/10NE, Scale 1:31 680, Circa 1972, Mining Recording, Manitoba Mines Branch.

REMARKS

1. Drill core sections of almost solid pyrite were reported 1.8 km WSW of this area (Non-confidential Assessment File No. 90267).
2. About 5.9 km northwest, 7.8 m (25.7 ft) of massive mineralization was reported from ddh H47 (Non-confidential Assessment File No. 90250). Also about 3-5 km northwest, six holes intersected long sections of core with sulphide mineralization (ddh H40, H43, ddh 8, 9, 13 in Non-confidential Assessment File Nos. 90250, 90252); one hole (ddh 13) returned maximum assays of 5.83 g/t (0.17 oz/ton) Ag, 0.11% Zn over (5 ft) (Non-confidential Assessment File No. 92736).
3. Up to 0.48% Zn was reported from ddh 19, drilled just north of the large island (Non-confidential Assessment File No. 92736).

Comp./Rev.	PA
By Date	09-90

PRODUCT Copper **N.T.S. AREA** 63K/11 NW **REF.** CU 1

NAME OF PROPERTY:
Lucile Lake (May Group)

OWNER OR OPERATOR AND ADDRESS
1990 - A.L. Parres Ltd.
P.O. Box 577
Flin Flon, Manitoba
R8A 1N4

OBJECT LOCATED: Centre May 14 **MINING DIVISION** The Pas

Lat. 54° 41.70' Long. 101° 23.10' **UNCERTAINTY:** 600 m

Sec. Tp. 66 R. 26 WPM

DESCRIPTION OF DEPOSIT

The Archean country rocks surrounding the deposit are a complex group of greenstone, derived from andesite and basalt, gabbro, and "spessartite" dykes. Two fault zones strike E-W, possibly through the deposit. Another fault, striking NE-SW, is cut by the easterly faults (Podolsky, 1958).

Chalcopyrite, pyrrhotite and pyrite occur in a mineralized zone 3.0 to 9.1 m (10 to 30 ft) wide which strikes north and dips 60-70° W. The zone plunges at 45-65° W for a length of 33.5 m (110 ft). It has a vertical extent of 27.4 m (90 ft) (Northern Miner, November 5, 1964).

Drilling on other, cancelled May claims cut diorite, greenstone, and porphyry and amphibolite dykes. A fault zone was also intersected.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located between Maria Lake and Lucile Lake, 1.6 km northwest of Jowsey Siding of the C.N. Railway. Cranberry Portage is 11 km south.

The property was partly covered by Kit 357, 329, 330, 342, and 343 (P 28177, 28213, 4, 27, 28). These claims were staked by various people in 1953 and were assigned to Hudson Bay Exploration and Development Company Limited later that year. An electromagnetic survey found no conductors on these claims. They were cancelled in 1955.

May 11-14 (P 3116-9B) and May 19-20 (P 3124-5B) were staked by P. Bachnick and H. Howell, respectively, in 1964. Maverick Mines & Oils Limited took an unrecorded option on the claims shortly after their staking. Geologic surveys were made in 1964 and 1965. Copper mineralization was found during trenching of the discovery outcrop. Maverick made ground magnetic and self-potential surveys, and drilled 28 holes in 1964. Twenty-two of these holes were on May claims described above, including 725 m in 17 holes on May 14 (P 3119B). Drilling indicated a core zone 1.5 to 3.0 m (5 to 10 ft) wide grading 2-3% Cu (Northern Miner, November 5, 1964).

Associated minerals or products of value
gold, silver, zinc.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

In 1969, Howell and Bachnick drilled 14 holes totalling 382 m (1251.5 ft) on May 11 and 14. Late that year Hanson Mines Limited drilled 11 holes on May 11, 14 and 30. The best drill core assay reported was 2.35% Cu, 1.03 g/t (0.03 oz/ton) Au, 6.86 g/t (0.2 oz/ton) Ag over 0.7 m (2.4 ft), from hole H.1 on May 14 (Non-confidential Assessment File No. 92277).

In 1973, airborne electromagnetic and magnetic surveys were done by Falconbridge Nickel Mines Limited under Airborne Permit No. 116, and by Sherritt Gordon Mines Ltd. under Airborne Permit No. 114 (Non-confidential Assessment File Nos. 91564, 92020).

In 1980, May 11-14, 19-20 were cancelled. That year, CB 11020 (Net 1), 129.5 ha, was staked by I. Bjornson (assisted by P. Bachnick) for A.L. Parres Ltd. The claim was cancelled in 1983.

P. Bachnick staked Yam 1 (W 47665), 240 ha, in 1983. A rock chip sampling program was carried out by the Manitoba Government that year. A 1 m thick solid sulphide (pyrite and chalcopyrite) vein in medium- to coarse-grained diorite was reported 1.2 km north-northeast (near the north boundary of the old May 11 claim); grab samples from this area were reported by P. Bachnick to have assayed up to 26% Cu (Wadien and Gale, 1984). The claim was transferred to Nor-Acme Gold Mines Limited in 1984. An option agreement with Marker Resources was reported in 1986. The claim was cancelled that year.

In 1986, W.F. Heidman staked War 3 (P 6037E) for A.L. Parres Ltd. In 1988, it was transferred to 327884 Alberta Ltd., and then, on the same day, to Varna Gold Inc.. Varna Gold Inc. was formed by the merger of Marker Resources and Varna Resources (Northern Miner, November 2, 1987). Exploration work carried out in 1988 included prospecting, rock and soil sampling, and geological mapping. The claim was cancelled in 1989.

The area was immediately restaked as Raw 3 (P 8479E), 240 ha, by Douglas Dubray for A.L. Parres Ltd..

REFERENCES

Bailes, A.H., 1971, Preliminary compilation of the geology of the Snow Lake - Flin Flon - Sherridon area; Manitoba Mines and Natural Resources, Mines Branch, Geological Paper 1/71, 27p.

Bruce, E.L., 1918, Amisk - Athapapuskow Lake district; Geological Survey of Canada, Memoir 105, 91p.

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REFERENCES cont'd

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Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. 90314, 91564, 92020, 92276, 92277, 92278, 71854 (Non-confidential parts).
b Corporation Files; Nor-Acme Gold Mines Limited; Marker Resources; +Maverick Mines & Oils Limited.

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Map 2457G, Cranberry Portage, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/11e,f, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

MAP REFERENCES cont'd

Maps C 20 343G, C 40 084G, Cranberry Portage, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

Maps OF87-11-3A/OF87-11-3B, (Geophysical compilations), Cranberry Portage area, Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 1726, Athapapuskow Lake region, (Geology), Scale 1:190 080 - Accompanying Memoir by Bruce (1918), Geological Survey of Canada.

Map 26-1957, Cranberry Portage (west half), (Geology), Scale 1:63 360 - Accompanying Descriptive Notes by Podolsky (1958), Geological Survey of Canada.

Map, Figure 18, Flin Flon - Elbow Lake area, (Geology), Scale 1:300 000 - Accompanying Publication by Davies et al. (1962), Manitoba Mines Branch.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Preliminary Map 1977 CP-3, Cranberry Portage, (Quaternary Geology), Scale 1:50 000, by V. Singhroy, Manitoba Mineral Resources Division.

Map, Flin Flon, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).

#Claim Map Series 63K/11NW, Scale 1:31 680, circa 1978, Mining Recording, Manitoba Mines Branch.

REMARKS

The deposit is located over a magnetic "high". Sulphides were reported on the E and F claims (probably Bond E and Bond F) on the southeast shore of Twin Lake, 3.2 km southwest of May 14. Sphalerite and galena occur in narrow quartz veinlets in felsite (Wright, 1938; Wallace, 1920).

A gold occurrence is indicated southeast of Twin Lake (Figure 18, Davies et al., 1962). A trench in this area was sampled (Non-confidential Assessment File No. 92468).

Drill core samples from drill holes near the north shore of Twin Lake, on CB 3392, yielded up to 0.29% Zn over 1.5 m and 0.19% Cu over 1.2 m for DDH No. 6; up to 0.13% Zn over 1.5 m for DDH No. 3; and up to 0.37% Cu over 0.4 m for DDH J-7 (Non-confidential Assessment File Nos. 92484, 92488, 92489; 63K/11 AU 11).

Comp./Rev.	RM	SMH	PA
By Date	12-75	01-78	02-90

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO. 749**

PRODUCT Copper **N.T.S. AREA** 63K/11 NE **REF.** CU 2

NAME OF PROPERTY:
Ansil

OWNER OR OPERATOR AND ADDRESS
1990 - Granges Inc.
2300- 885 West Georgia St.
Vancouver, British Columbia
V6C 3E8

OBJECT LOCATED: Centre of Yak #1 M.C. **MINING DIVISION** The Pas

Lat. 54° 43.10' Long. 101° 10.70' **UNCERTAINTY:** 500 m

Sec. Tp. 66 R. 25 WPM

DESCRIPTION OF DEPOSIT

Metamorphosed basic to intermediate volcanic rocks (Amisk group) of Archean age are the oldest rocks in the area. These have been intruded by a series of basic to acid intrusives classified as Archean to Proterozoic in age.

The volcanic rocks have been sheared along a band extending throughout the length of the property. The sulphide zone, which occupies the zone of shearing, is 6440 m (4 mi) long and 61 m (200 ft) wide.

A zone of sulphide concentration within the sulphide belt is at least 640 m (2100 ft) long and 30.5 m (100 ft) wide, as delineated by outcrop information, and lies to the south and southeast of Swamp Lake. It contains massive pyrrhotite with minor chalcopyrite, pyrite, sphalerite, galena and bornite.

Quartz veins containing pyrite, galena and chalcopyrite and having values in gold and silver lie on strike to the south of Swamp Lake. Banded iron formation also occurs in the area.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located along the north shore of Brunne Lake.

The claim history of this deposit is very complex as many claims have been recorded over the ground throughout some fifty years of exploration. Therefore a generalized claim history will be presented rather than a more detailed description.

The Dominion group of claims (Dominion #1 was claim #29140) were recorded by A.L. Stewart in 1919. Molybdenite and pyrite were reported on the more northerly claims of the Dominion group (Wallace, 1919). Wallace (1920) described the sulphide mineralization found on several claims in the area, including the Caribou claim (near Swamp Lake) where copper, nickel, gold and platinum were reported. In 1923 the Camp (P 942) claim was recorded by W.L. West. Rock trenching was recorded on both properties during the 1920's.

Associated minerals or products of value
gold, silver, zinc, nickel, platinum.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Wright (1938) reported an assay of up to 1543 g/t (45 oz/ton) Ag from the Dominion group of claims (see 63K/11 AU 2; Timm, 1926, Godard, 1926). The claims were transferred to the Gurney Gold Mines, Limited in 1935 and were taken to lease in 1936 (M-633 for Dominion #1, M-631 for Camp). God's Lake Gold Mines Limited gained control of the property and renewed the leases on the properties. The leases were given new lease numbers (M-1834 for Dominion #1, M-1832 for Camp).

In 1953 the Pal group of claims were recorded by W. Johannesson. Rock trenching was recorded in 1953 but the group was cancelled in 1955.

From the point of view of development work the most important group of claims recorded over the deposit are the Kay #1-54 (P 3973B-4026B) and the Yak #1-15 (P 5735B-5749B). These claims were recorded in 1964 by Charles Campbell (Kay claims) and Archie Thompson (Yak claims). During that year the Kay claims were transferred to Helen Robinson and B. Ciglen. In 1965 the Yak and Kay claims were transferred to Sam Ciglen.

A magnetometer survey, a geological survey, and a 17-hole 1778 m (5833 ft) diamond drill program was carried out on the property in 1965. The majority of the holes were drilled along the main sulphide zone that had been delineated by the magnetometer survey. The sulphide drill sections were assayed, with assays ranging from nil up to 0.13% copper, 0.12% nickel, 0.10% zinc, 4.46 g/t (0.13 oz) Au and 9.6 g/t (0.28 oz/ton) silver (Non-confidential Assessment File No. 90293). The conclusions from the combined survey was that no economic quantities of base metals were found or are expected to be found. The claims were all cancelled by the end of 1969.

In 1973, Sherritt Gordon Mines Limited did airborne survey work over Brunne Lake under AP 114 (Non-confidential Assessment File No. 92020).

In 1975, D. Zagozewski (assisted by Lorne Lauvstad) staked CB 7173 and CB 7174 (comprising 64.7 ha and 169.9 ha respectively) for W. Bruce Dunlop. The claims covered parts of the old Kay 15-17, 22-24, 30 claims. The claim blocks were cancelled in 1977.

The following restakings were recorded in 1979:

Claim Name	Acreage	Staker	Owner
CB 10537 (Yap)	259 ha	Roland Bell	Hudson Bay Exploration and Development Company Limited
CB 10538 (Yap)	259 ha	Roland Bell	
CB 11515 (Brunne 1)	247 ha	Phillip Highway	Kerr Addison Mines Limited
CB 11516 (Brunne 2)	130 ha	Brian Porter	"
CB 11517 (Brunne 3)	243 ha	Brian Porter	"
CB 11518 (Brunne 4)	259 ha	Brian Porter	"
CB 10473 (Brunne 11)	143 ha	Brian Porter	"
Brunne 14 (W 46282)	17 ha	Mark Taylor	"
Brunne 15 (W 46283)	17 ha	Mark Taylor	"
Brunne 16 (W 46284)	17 ha	Brian Porter	"
Brunne 17 (W 46285)	17 ha	Brian Porter	"
Brunne 18 (W 46286)	17 ha	Brian Porter	"

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

The claims owned by Kerr Addison Mines Limited were transferred to W. Bruce Dunlop Limited (N.P.L.) in 1983. The area was visited by the Manitoba Government in 1984: solid pyrrhotite and pyrite strata were noted in mafic volcanic-sedimentary rocks in two localities (Locality #9, 28, Parberry and Gale, 1984). W. Bruce Dunlop Limited (N.P.L.) transferred the claims to Granges Exploration Ltd. in 1987.

In 1988, Granges Exploration Ltd. staked additional claims in the area: Frazer 1-3 (P 6461E-6463E) comprising 193 ha, 150 ha, and 95 ha, respectively. That year, it was announced that Granges Exploration Ltd. and Mid-North Resources Limited were exploring the area jointly. Grab samples were collected, and some gold values were obtained in assays. In 1989, drilling and soil sampling was carried out along a 5.5 km shear zone in the Gurney Mine area (Northern Miner, March 13 and April 17, 1989). Granges Exploration Ltd. changed its name to Granges Inc. in 1989.

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Godard, J.S., 1926, Experimental tests on gold ore from Dominion claims on Copper Lake, northwestern Manitoba; Canada Department of Mines, Mines Branch, Investigations in Ore Dressing and Metallurgy, 1924, No. 643, Report No. 214a, p. 65-67.

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Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. 92020, 90292, 90293.
b Corporation Files; Ventures Limited; Ansil Mines Limited; Granges Exploration Ltd. (1988-89 file).
c Mining Engineering Files; Wylie Dominion Gold Mines Ltd..

REFERENCES cont'd

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Podolsky, T., 1958, Cranberry Portage (west half) (Descriptive Notes); Geological Survey of Canada, Map 26-1957.

Timm, W.B., 1926, Examination of and experimental tests on gold ore from Dominion claims, Copper Lake, northwestern Manitoba; Canada Department of Mines, Mines Branch, Investigations in Ore Dressing and Metallurgy, 1924, No. 643, Report No. 214, p. 62-65.

Wallace, R.C., 1919, The gold discovery at Copper Lake, northern Manitoba; Canadian Mining Journal, v. 40, No. 10, p. 731-733.

Wallace, R.C., 1920, Mining and mineral prospects in northern Manitoba; Government of Manitoba, Office of Commissioner of Northern Manitoba, Northern Manitoba Bulletin, p. 30-31.

Wright, J.F., 1938, Geology and mineral deposits of a part of northwest Manitoba; Geological Survey of Canada, Summary Report 1930, Part C, p. 26, 48-50.

MAP REFERENCES

*Map 63K/11, Cranberry Portage, (Topographic), Scale: 1:50 000, Energy, Mines and Resources Canada (1985).

Map 2457G, Cranberry Portage, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/11g,h, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 877, Geological Survey of Canada (1981).

Maps C 20 343G, C 40 084G, Cranberry Portage, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

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Maps OF87-11-3A/OF87-11-3B, (Geophysical compilations), Cranberry Portage area, Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 1726, Athapapuskow Lake region, (Geology), Scale 1:190 080 - Accompanying Memoir by Bruce (1918), Geological Survey of Canada.

Map 51-17, Cranberry Portage (east half), (Geology), Scale 1:40 000 - Accompanying Paper by Podolsky (1951), Geological Survey of Canada.

Map 26-1957, Cranberry Portage (west half), (Geology), Scale 1:63 360 - Accompanying Descriptive Notes by Podolsky (1958), Geological Survey of Canada.

Map, untitled, (Geology), Scale 1:4800, in Non-confidential Assessment File No. 90292, Manitoba Mines Branch.

Preliminary Map 1977 CP-3, Cranberry Portage, (Quaternary Geology), Scale 1:50 000, by V. Singhroy, Manitoba Mineral Resources Division.

Map, Flin Flon, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).

#Claim Map Series 63K/11NE, Scale 1:31 680, circa 1969, Mining Recording, Manitoba Mines Branch.

REMARKS

The deposit flanks a magnetic high.

Comp./Rev.	RM	PA
By Date	12-75	02-90

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO. 750**

PRODUCT Copper	**N.T.S. AREA** 63K/11 SW	**REF.** CU 3

NAME OF PROPERTY:
Four Mile Island

OWNER OR OPERATOR AND ADDRESS
1990 - Varna Gold Inc.
485, 926- 5th Avenue S.W.
Calgary, Alberta
T2P 0N7

OBJECT LOCATED: Centre of Brant #1 M.C. **MINING DIVISION** The Pas

Lat. 54° 34.50'	Long. 101° 28.50'	**UNCERTAINTY:** 500 m
Sec.	Tp. 64	R. 27 WPM

DESCRIPTION OF DEPOSIT

The country rock in the vicinity of the deposit is comprised of greenstone derived from andesite and basalt of Precambrian age.

Drilling done on the property intersected andesite agglomerate, schistose and silicified andesite. A fine grained diorite was also intersected.

Pyrite and chalcopyrite were the main sulphides encountered. The highest assay value for copper was 0.18%.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located on a large island in the east arm of Athapapuskow Lake.

The deposit was first recorded as the Brant #1 (P 21019) in 1949 by Brant Wallenhaupt. The claim was transferred to A.L. Parres in 1950. A program of diamond drilling was carried out in 1950. A total of 407 m (1335 ft) were drilled in five holes. The claim was cancelled in 1954.

Mopa #1 (P 32961) was recorded in 1955 by L.G. Parent. Airborne geophysical surveys were carried out by Parrex Syndicate under AP 16 in 1956 (Non-confidential Assessment File No. 91708). The claim was cancelled in 1957.

John Murray then recorded the Cran #2 (P 82286) in 1960. This claim was cancelled in 1971, but was relocated as Cran #2 (P 3134E) by Richard Murray the same year. In 1973, Sherritt Gordon Mines Limited did airborne survey work under AP 114 (Non-confidential Assessment File No. 92020). Cran #2 was cancelled in 1976.

Richard Murray restaked the area under CB 9291, area 98 ha, in 1978.

Associated minerals or products of value
gold, silver, nickel.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

In 1980, the holder's name changed to Ray-Dor Resources Ltd. and soon after to Hudson Bay Exploration and Development Company Limited. Airborne survey work was carried out by Canadian Nickel Company Limited that year (Non-confidential Assessment File No. 92473). CB 9291 was transferred back to Ray-Dor Resources Ltd. in 1982. That year, a sample from a 1 m^2 by 10 m deep shaft yielded 0.35 Au and 2.76 Ag (assay units were not reported and are assumed to be in g/t). Four grab samples taken from a trench and two samples from an old pit returned trace values of gold and silver.

In 1983, Pond 2 (W 47711), area 192 ha, was staked by Richard Murray for Ray-Dor Resources Ltd.. It was transferred to A.L. Parres Ltd. that same year.

CB 9291 was cancelled in 1984.

Pond 2 (W 47711) was transferred to Varna Gold Inc. in 1988.

REFERENCES

Bruce, E.L., 1919, Athapapuskow Lake district, Manitoba; Geological Survey of Canada, Summary Report, 1918, Part D, p. 1.

Davies, J.F., Bannatyne, B.B., Barry, G.S., and McCabe, H.R., 1962, Geology and mineral resources of Manitoba; Manitoba Mines and Natural Resources, Mines Branch, p. 64-78.

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Hosain, I.T., 1984, Interpretation of airborne magnetic gradiometer surveys of the area south of the Flin Flon - Snow Lake Belt (parts of NTS 63K and 63J); Manitoba Energy and Mines, Mineral Resources Division, Mines Branch, Open File Report OF84-2, 26p.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 22.

Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. 90305, 91172, 91708, 92016, 92020, 92357, 92473, 92574, 92576; 70555 (Non-confidential parts).
b Corporation Files; Pronto Explorations Limited.
c Unpublished Information Files; 63K/10-15.

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MAP REFERENCES

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Map 2457G, Cranberry Portage, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/11c,d, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 343G, C 40 084G, Cranberry Portage, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

Map OF84-2, (Airborne Gradiometer interpretation), Scale 1:100 000 - Accompanying Report by Hosain (1984), Manitoba Mines Branch.

Maps OF87-11-3A/OF87-11-3B, (Geophysical compilations), Cranberry Portage area, Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 26-1957, Cranberry Portage (west half), (Geology), Scale 1:63 360 - Accompanying Descriptive Notes by Podolsky (1958), Geological Survey of Canada.

MAP REFERENCES cont'd

Map, Figure 18, Flin Flon - Elbow Lake area, (Geology), Scale 1:300 000 - Accompanying Publication by Davies et al. (1962), Manitoba Mines Branch.

Map, Flin Flon, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).

#Claim Map Series 63K/11SW, Scale 1:31 680, circa 1954, Mining Recording, Manitoba Mines Branch.

REMARKS

1. The deposit is located in an area of "low" magnetic intensity. C. Kuryliw, consulting geologist, visited Four Mile Island in 1971. He reported trenching on a copper showing in tuffs at an unknown location on the island. A map made by him indicates 0.80% Cu in a shear 0.8 km west of the showing described on the front of this card (Non-confidential Assessment File Nos. 91172, 92016).

2. Chalcopyrite, bornite and gold were reported near the east arm of Athapapuskow Lake (Wallace, 1920; Wright, 1938). Drilling 1.15 km NE, encountered chalcopyrite and bornite (DDH 15: 1.42% Cu, 1.03 g/t Ag over 15 cm) and malachite (DDH 18: 0.05% Cu, 4.1 g/t Ag over 55 cm) (Non-confidential Assessment File No. 91172). About 2.65 km ENE, a drill core assay of 0.14% Cu over 1.2 m was obtained (Non-confidential Assessment File Nos. 92574, 92576).

3. Pyrite and chalcopyrite were reported 3.9 km ENE "on a small island in East Arm of Lake Athapapuskow, about 1.5 miles from Cranberry Portage" on the Berry M.C. claim (Holloway, 1939).

4. Chalcopyrite, molybdenite and trace galena were noted near the north shore of the east arm of Athapapuskow Lake, 2.5 km north and 4 km NNE (#36, 37, 39, Parberry and Gale, 1984).

5. About 4-4.6 km north, DDH BE-53-80 intersected 16.5 m of core with an estimated 70% magnetite at a depth of 42 m; and DDH BE-55-80 returned drill core assays of up to 0.1% Cu, 0.08% Zn (Non-confidential Assessment File No. 92357).

Comp./Rev.	RM	SMH	PA
By Date	12-75	01-78	02-90

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO. 751**

PRODUCT Copper **N.T.S. AREA** 63K/11 NE **REF.** CU 4

NAME OF PROPERTY:
Third Cranberry Lake

OWNER OR OPERATOR AND ADDRESS
1990 - Open

OBJECT LOCATED: Centre Jupiter #2 M.C. **MINING DIVISION** The Pas

Lat. 54° 42.0' Long. 101° 06.5' **UNCERTAINTY:** 500 m

Sec. Tp. 66 R. 25 WPM

DESCRIPTION OF DEPOSIT

The deposit is located in an area of Amisk andesite. Narrow bands of very fine-grained acid volcanics are also present.

Massive and disseminated chalcopyrite, with pyrite and pyrrhotite, was found in sheared, altered andesite, rhyolite, diorite, gabbro, and quartz-porphyry. Chalcopyrite stringers were reported in drill logs and on surface. Bornite occurred in one trench.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located on the east end of Otaskawetawin Lake.

The deposit was first recorded as the Copper Mine M.C. (28189) by Jacob Cook in 1918. The claim was transferred to J.P. Gordon in 1922 and then (same date) to Copper Lake Mining Company, Limited. In 1926 Lease #745 was issued. The lease was renewed in 1947 but cancelled in 1951.

Copper Mine was restaked as the Jupiter #2 (P 23988) in 1951 by Thomas Webb. Webb did 427 m (1400 ft) of drilling on this claim in 1953. Two years later Hudson Bay Exploration and Development Company Limited (H.B.E.D.) did a further 429 m (1408 ft) of drilling (Non-confidential Assessment File No. 90287). No assays were reported. Jupiter 2 was cancelled in 1958. H.B.E.D. did airborne survey work in 1964 under AP 50.

Archie Talbot recorded CB 1884 in 1970 and assigned it to S.D. Moore. Talbot drilled at least 9 holes, totalling 208 m (683.3 ft). Some of this work may have been done by H.B.E.D.. Assays from the drilling yielded 0.16% to 13.45% Cu. Drill widths of these assays are unknown. By the end of 1972, 48.3 m^3 (1706 cu ft) of trenching had been done on surface showings. The highest assay, from a 0.3 m (1 ft) sample in a test pit, returned 16.02% Cu (Non-confidential Assessment File No. 91491).

Associated minerals or products of value
gold, silver, zinc.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

In 1972, A. Talbot, J. Murray, I. Bjornson, and Knobby Lake Mines Limited were each assigned a 25% interest in CB 1884. In 1973, Sherritt Gordon Mines, Limited did airborne survey work in the area under AP 114 (Non-confidential Assessment File No. 92020). The interests of Bjornson and Knobby Lake were cancelled and vested in the Crown in 1974. The claim block lapsed in 1976.

In 1983, Edward Ballentyne (assisted by Ron Highway) staked Truck 3 (W 45544), area 192 ha, for Ray-Dor Resources Ltd.. In 1984, the Manitoba Government examined a trench (2.5 x 1 x 1 m) and 14 boxes of core from 3 holes drilled near the south part of the claim near Third Cranberry Lake: pyrite and chalcopyrite in 15 cm veinlets in chloritic mafic volcanic rocks were noted (#16, Parberry and Gale, 1984). Truck 3 (W 45544) was cancelled in 1985.

REFERENCES

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Manitoba Mines Branch:
  a Non-confidential Assessment Files; File Nos. 90286, 90287, +91491, 92020, 92405.
  b Corporation Files; Knobby Lake Mines Limited.

Parberry, D. and Gale, G.H., 1984, Mineral deposit investigations in the Flin Flon area; Manitoba Energy and Mines, Mineral Resources, Report of Field Activities, 1984, p. 60, 62.

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Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/11g,h, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 877, Geological Survey of Canada (1981).

Maps C 20 343G, C 40 084G, Cranberry Portage, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

Maps OF87-11-3A/OF87-11-3B, (Geophysical compilations), Cranberry Portage area, Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 51-17, Cranberry Portage (east half), (Geology), Scale 1:40 000 - Accompanying Paper by Podolsky (1951), Geological Survey of Canada.

Map, Figure 18, Flin Flon - Elbow Lake area, (Geology), Scale 1:300 000 - Accompanying Publication by Davies et al. (1962), Manitoba Mines Branch.

Preliminary Map 1977 CP-3, Cranberry Portage, (Quaternary Geology), Scale 1:50 000, by V. Singhroy, Manitoba Mineral Resources Division.

Map, Flin Flon, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).

#Claim Map Series 63K/11NE, Scale 1:31 680, circa 1975, Mining Recording, Manitoba Mines Branch.

REMARKS

1. The deposit flanks a magnetic "high".

2. About 3.95 km ESE, on CB 8926, DDH BE-83 returned 0.05 g/t Au, 0.5-1.0 g/t Ag, 0.01-0.02% Cu, and 0.01-0.34% Zn for most of the core section from 47.5 to 108 m (156-355 ft); maximum Zn assays of 0.34% over 3 m, 0.31% over 0.9 m, and 0.12% over 3 m and 2.6 m were reported (Non-confidential Assessment File No. 92406).

Comp./Rev.	RM	SMH	PA
By Date	12-75	12-77	02-90

PRODUCT Copper **N.T.S. AREA** 63K/11 SW **REF.** CU 5

NAME OF PROPERTY:
Dixon

OWNER OR OPERATOR AND ADDRESS
1990 - Open

OBJECT LOCATED: Centre of Thompson **MINING DIVISION** The Pas

Lat. 54° 35.58' Long. 101° 21.66' UNCERTAINTY: 700 m

Sec. Tp. 65 R. 26 WPM

DESCRIPTION OF DEPOSIT

Chalcopyrite was reported in east-trending shear zones, dipping 25° S, in a Precambrian greenstone intrusion into granitic rocks.

HISTORY OF EXPLORATION AND DEVELOPMENT

The showing is on or near the townsite boundary of Cranberry Portage. P.T.H. 10 is approximately 1 km west.

A.L. Stewart staked Stuart, or Stewart, M.C. (28196) in 1918. Pits and trenches were dug and blasted before the claim was cancelled in 1922.

The following year H.L. Thompson restaked the property as Thompson (34669). Again, pits and trenches were opened. In 1928, Dixon Mines Ltd. optioned a group of claims, including this one. In announcing the option, Dixon Mines reported that channel samples assayed 7.5% Cu, with traces of gold and silver (Dixon Corp. File). Dixon Mining Company, Limited took over the assets of Dixon Mines Ltd. in March, 1928.

A Radiore survey in June, 1928 found conductors on this claim and several others. Assays of $8.00 to $27.00 (copper-zinc) were reported over thousands of feet of rock (Manitoba Miner, June 15, 1928). It is not known from which claim(s) these assays were taken, but massive chalcopyrite was reported on Thompson M.C. (Dixon Corp. File). Three holes, totalling 155 m (510 ft), were drilled on the property, but not necessarily on Thompson M.C. Trenching was reported on Thompson in 1929. The claim was cancelled in 1930.

Later history of the property is tabulated below. A.B. 1 and Hecks 14 were adjacent claims. A.B.C. 1 was a restaking of A.B.1.

Associated minerals or products of value
gold, silver.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Year	Activity
1952	A.B.1 (P 26731) by A. Ostry
1954	Assigned to G. Ostry
1954	Optioned to Hudson Bay Exploration and Development Company Limited which then did an HLEM survey (Non-confidential Assessment File No. 91869).
1955	Option abandoned
1956	Airborne survey by Parrex Syndicate under AP 16 (Non-confidential Assessment File No. 91708).
1963	Cancelled
1954	Hecks 14 (P 31969) staked by Mrs. I.D. Gaboury
1958	Cancelled
1964	A.B.C. 1 (P 4704B) staked by J. O'Hara
1967	Cancelled
1970	CB 1885 staked by A. Talbot
1972	Cancelled
1973	Sherritt Gordon Mines Limited did an airborne survey under AP 114 (Non-confidential Assessment File No. 92020).
1982	Dump 12 (W 47368), area 128 ha, staked by Roy Anderson
1983	Cran 30 (W 47082), area 192 ha, staked by P. Dunlop for W. Bruce Dunlop Limited (N.P.L.)
1984	CB 12741 (Cran 35), area 131 ha, staked by P. Dunlop for W. Bruce Dunlop Limited (N.P.L.)
1985	Dump 12 (W 47368), Cran 30 (W 47082) cancelled
1986	CB 12741 (Cran 35) cancelled

REFERENCES

Bruce, E.L., 1918, Amisk - Athapapuskow Lake district; Geological Survey of Canada, Memoir 105, 91p.

Holloway, J.M., 1939, Conglo M.C.; 63K/11 SW; in Manitoba Mines Branch, Unpublished Information File (63K/10-15).

Hosain, I.T., 1984, Interpretation of airborne magnetic gradiometer surveys of the area south of the Flin Flon - Snow Lake Belt (parts of NTS 63K and 63J); Manitoba Energy and Mines, Mineral Resources Division, Mines Branch, Open File Report OF84-2, 26p.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 22.

Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. 91708, 91869, 92020.
b Corporation Files; +Dixon Mining Company, Limited.
c Mining Engineering Files; Dixon Mining Company, Limited.
d Unpublished Information Files; 63K/10-15.
e Mining Recording Files (The Pas); File No. 2144 (Thompson).

REFERENCES cont'd

Podolsky, T., 1958, Cranberry Portage (west half) (Descriptive Notes); Geological Survey of Canada, Map 26-1957.

Wadien, R. and Gale, G.H., 1984, Geochemistry of felsic intrusive and extrusive rocks in the Nisto Lake - Lucille Lake areas, Flin Flon, Manitoba; in Manitoba Energy and Mines, Mineral Resources, Report of Field Activities, 1984, p. 66-67.

Wallace, R.C., 1920, Mining and mineral prospects in northern Manitoba; Government of Manitoba, Office of Commissioner of Northern Manitoba, Northern Manitoba Bulletin, p. 28.

+Wright, J.F., 1938, Geology and mineral deposits of a part of northwest Manitoba; Geological Survey of Canada, Summary Report 1930, Part C, p. 48.

MAP REFERENCES

*Map 63K/11, Cranberry Portage, (Topographic), Scale: 1:50 000, Energy, Mines and Resources Canada (1985).

Map 2457G, Cranberry Portage, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/11c,d, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 343G, C 40 084G, Cranberry Portage, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

Map OF84-2, (Airborne Gradiometer interpretation), Scale 1:100 000 - Accompanying Report by Hosain (1984), Manitoba Mines Branch.

Maps OF87-11-3A/OF87-11-3B, (Geophysical compilations), Cranberry Portage area, Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 1726, Athapapuskow Lake region, (Geology), Scale 1:190 080 - Accompanying Memoir by Bruce (1918), Geological Survey of Canada.

MAP REFERENCES cont'd

Map 26-1957, Cranberry Portage (west half), (Geology), Scale 1:63 360 - Accompanying Descriptive Notes by Podolsky (1958), Geological Survey of Canada.

Map, Flin Flon, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).

#Claim Map Series 63K/11SW, Scale 1:31 680, circa 1928, Mining Recording, Manitoba Mines Branch.

REMARKS

1. "An 18 inch (46 cm) quartz vein containing chalcopyrite and pyrite was traced along a strike of S36°E for about 840 feet (256 m)" on the Conglo M.C. claim, located a short distance north of Cranberry Portage (Holloway, 1939).

2. 'Copper' veins (5-10 cm wide) were reported on the Dump No. 15 (W 47385) claim, 1.5 km NW (Non-confidential Assessment File No. 92606). Pyrite and chalcopyrite veins were noted in mafic volcanic rocks, about 2.2-2.95 km NW (Locality #2, 3, Wadien and Gale, 1984; Non-confidential Assessment File No. 90309).

3. A 5 cm vein of 'copper' was reported in a rock quarry on the Dump No. 1 (W 47280) claim, about 2.25 km NNW: a sample assay of 1 g/t (0.03 oz) Au, 36.7 g/t (1.07 oz) Ag, 21.6% Cu, and 0.09% Zn was reported (Non-confidential Assessment File No. 92606). A 7 m pyritic zone was reported 3.55 km NNW (Locality #40, Wadien and Gale, 1984); just to the west of this showing, chalcopyrite (and bornite?) was reported on the Stewart (File No. 200546) claim (Wallace, 1920; 63K/11NW Mining Claim Map, circa 1928).

Comp./Rev.	SMH	PA
By Date	11-77	02-90

PRODUCT Copper **N.T.S. AREA** 63K/11 NE **REF.** CU 6

NAME OF PROPERTY:
Copper Mountain

OWNER OR OPERATOR AND ADDRESS
1990 - W. Bruce Dunlop Limited (N.P.L.)
201-2639 Portage Avenue
Winnipeg, Manitoba
R3J 0P7

OBJECT LOCATED: Centre of island **MINING DIVISION** The Pas

Lat. 54° 39.92' Long. 101° 08.88' **UNCERTAINTY:** 300 m

Sec. Tp. 65 R. 25 WPM

DESCRIPTION OF DEPOSIT

Chalcopyrite, pyrite, and minor pyrrhotite occur as irregular patches in a pegmatite vein or dyke which intrudes Precambrian greenstone. The dyke strikes north for 122 to 152 m (400 to 500 ft) and dips steeply. It is 0.6 to 1.8 m (2 to 6 ft) wide. The dyke is more basic (hornblende-rich) along its margins. The greenstone consists of massive fine-grained basalt grading to coarse-grained gabbro.

Gold was reported in assays from the pegmatite.

HISTORY OF EXPLORATION AND DEVELOPMENT

The occurrence is probably located on an island in the northeastern part of Second Cranberry Lake, approximately 16 km northeast of Cranberry Portage.

Rex (27072), staked by W.S. Gillis in 1917, may have been the first staking here. The location of this Rex is uncertain. It was cancelled in 1918.

S. Olafson staked Rock (29111) in 1919. By 1925 the claim had been assigned to S.E. Johnston (1/2 interest) and two other prospectors. A vesting order in 1928 resulted in Johnston controlling 5/8 of the claim, and G. Westman controlling the remainder. Surface work, pitting and trenching, was reported each year from 1919 to 1932. Other prospectors felt that the work reported was not actually done. In 1927, H.L. Thompson staked Copper Mountain (45131) over the showing. This Copper Mountain claim and Rock M.C. apparently coexisted until the former claim lapsed in 1931 (Copper Mountain, Rock Claim Files).

In the summer of 1928, V.J. Melsted, Vice-President of Milton Hersey and Company visited the property on behalf of the Manitoba Miner. His report led to the formation of Copper Mountain Mining Syndicate Limited. Grab samples taken by Melsted returned 0.13% Cu to 10.12% Cu with 0.7 to 8.6 g/t (0.02 to 0.25 oz/ton Au). A chip sample taken over 1.5 m (5 ft) yielded 2.5% Cu. The assays came from 8 different pits. A Radiore survey found a conductor in a depression west of the dyke (Copper Mountain Corporation File).

Associated minerals or products of value
gold.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Cold Lake Mines Limited optioned the property in September, 1928. Their engineer examined the deposit. His assays returned low average values of $0.88 to $1.17 for copper and gold. In an area of greater chalcopyrite concentration, a sample assayed $7.46 for copper and gold. The option was dropped later that autumn (Cold Lake Corporation File).

Copper Mountain Mining Syndicate picked up an option on the deposit late in 1928. The only work reported was surface work.

Rock M.C. was cancelled in 1932. The property was subsequently restaked by a succession of five Copper Mountain claims. Surface work was reported during the 1940's.

Later stakings are summarized below:

Year	Activity
1951	Copper Island (P 23828) staked by W. Achtemichuk
1952	Cancelled
1954	Bend 8 (P 31576) staked by M. McGillvary and assigned to D. Banks.
1955	Optioned to Hudson Bay Exploration and Development Company Limited (H.B.E.D.)
1956	Option abandoned
1957	Cancelled
1964	Airborne survey by H.B.E.D. under AP 50
1970	CB 2491 staked by I. Bjornson and assigned to S.D. Moore
1976	Cancelled
1981	Airborne survey by Canadian Nickel Company Limited (Non-confidential Assessment File No. 92472)
1986	Ian 2 (P 5865E), area 140 ha, staked by Brian Murray for Ray-Dor Resources Ltd.
1988	Cancelled
1989	Secran (P 8023E), area 16 ha, staked by Peter Dunlop and W. Dunlop for W. Bruce Dunlop Limited (N.P.L.)

REFERENCES

Allan, J.D., Milligan, G.C., and Springer, G.D., 1951, A Guide for Prospectors in Manitoba; Manitoba Mines Branch Publication, 4th Edition, p. 108.

Bruce, E.L., 1918, Amisk - Athapapuskow Lake district; Geological Survey of Canada, Memoir 105, 91p.

Davies, J.F., Bannatyne, B.B., Barry, G.S., and McCabe, H.R., 1962, Geology and mineral resources of Manitoba; Manitoba Mines and Natural Resources, Mines Branch, p. 64-78.

Holloway, J.M., 1939, Nine surveyed claims; 63K/11 NE; in Manitoba Mines Branch, Unpublished Information File (63K/10-15).

REFERENCES cont'd

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Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 20-24.

Manitoba Mines Branch:
a Corporation Files; +Copper Mountain Mining Syndicate Limited; +Cold Lake Mines Limited.
b Non-confidential Assessment Files; File No. 90288, 90290, 92024, 92407, 92408, 92472.
c Mining Engineering Files; Webb Shaft; Fox Bay Shaft.
d Unpublished Information Files; 63K/10-15.
e Mining Recording Files (The Pas); File Nos. 2508 (Copper Mountain), 6165 (Rock).

Podolsky, T., 1951, Cranberry Portage (east half) (Descriptive Notes and Map); Geological Survey of Canada, Paper 51-17.

Wallace, R.C., 1920, Mining and mineral prospects in northern Manitoba; Government of Manitoba, Office of Commissioner of Northern Manitoba, Northern Manitoba Bulletin, p. 28, 31.

Wright, J.F., 1938, Geology and mineral deposits of a part of northwest Manitoba; Geological Survey of Canada, Summary Report 1930, Part C, p. 48.

MAP REFERENCES

Map 63K/11, Cranberry Portage, (Topographic), Scale: 1:50 000, Energy, Mines and Resources Canada (1985).

Map 2457G, Cranberry Portage, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/11g,h, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 877, Geological Survey of Canada (1981).

MAP REFERENCES cont'd

Maps C 20 343G, C 40 084G, Cranberry Portage, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

Map OF84-2, (Airborne Gradiometer interpretation), Scale 1:100 000 - Accompanying Report by Hosain (1984), Manitoba Mines Branch.

Maps OF87-11-3A/OF87-11-3B, (Geophysical compilations), Cranberry Portage area, Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 1726, Athapapuskow Lake region, (Geology), Scale 1:190 080 - Accompanying Memoir by Bruce (1918), Geological Survey of Canada.

#Map 51-17, Cranberry Portage (east half), (Geology), Scale 1:40 000 - Accompanying Paper by Podolsky (1951), Geological Survey of Canada.

Map, Figure 18, Flin Flon - Elbow Lake area, (Geology), Scale 1:300 000 - Accompanying Publication by Davies et al. (1962), Manitoba Mines Branch.

Claim Map Series 63K/11NE, Scale 1:31 680, circa 1947, Mining Recording, Manitoba Mines Branch.

REMARKS

1. Sulphides were found over a width of 15 m (50 ft) on the southwest shore of Second Cranberry Lake, approximately 6.5 km southwest of Copper Mountain (Holloway, 1939). Holloway does not mention any specific sulphide minerals. About 7.6 km southwest of Copper Mountain, chalcopyrite and bornite was found on the Cameron (File No. 201179) claim (Wallace, 1920; 63K/11NW Mining Claim Map, circa 1928). A zinc showing is indicated 1.25 km SE of Cameron (Figure 18, Davies et al., 1962). Two short shafts were sunk near the narrows between First and Second Cranberry Lakes. The Fox Bay or First Cranberry Lake Shaft on the north shore of First Cranberry Lake, west of the narrows, was about 15 m (50 ft) deep. The Webb Shaft, at least 15 m deep, was sunk on the south shore of Second Cranberry Lake, 1 km east of the narrows (Fox Shaft, Webb Shaft, Mining Engineering Files). Nothing is known about the mineralogy at either location. Wallace (1920) reported that soft chloritic rock with copper carbonate stains found at the narrows between First and Second Cranberry Lakes on the north side, were being investigated by shaft sinking but nil results were obtained. A drill hole in this area, intersected 15 m of talc (DDH 1, Non-confidential Assessment File No. 90290). Gold is indicated in these two areas on Figure 18 of Davies et al. (1962).

2. About 5.25 km SW, "small amounts of zinc mineralization" was reported in drill core from the Cox 8 (P 20468) claim (Non-confidential Assessment File No. 90288; see also Non-confidential Assessment File No. 92408).

REMARKS cont'd

3. Several long sections of core from DDH BE-43-80, BE-44-80, and BE-47-80 (west of this area), assayed trace Cu, Zn, Au, Ag (Non-confidential Assessment File No. 92407).

4. At the east end of Simonhouse Lake, DDH S-6 had a drill core assay of 0.1% Zn over 1.4 m (Non-confidential Assessment File No. 92024).

Comp./Rev.	SMH	PA
By Date	12-77	02-90

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO. 754**

PRODUCT Copper **N.T.S. AREA** 63K/11 NW **REF.** CU 7

NAME OF PROPERTY:
Lucile Lake Shaft (Dwight)

OWNER OR OPERATOR AND ADDRESS
1990 - A.L. Parres Ltd.
P.O. Box 577
Flin Flon, Manitoba
R8A 1N4

OBJECT LOCATED: Shaft **MINING DIVISION** The Pas

Lat. 54° 43.00' Long. 101° 23.01' **UNCERTAINTY:** 300 m

Sec. Tp. 66 R. 27 WPM

DESCRIPTION OF DEPOSIT

A mineralized zone occurs in amphibolite and basic hybrid gneiss of the Amisk Group. The sulphide-bearing quartz veinlets were investigated for copper.

HISTORY OF EXPLORATION AND DEVELOPMENT

A shaft was sunk between western Lucile Lake and Nikotwasik Lake, approximately 14 km north of Cranberry Portage.

Dwight (33944) was staked as a copper prospect by J.A. Anderson in 1922. It was immediately assigned to Central Trust Savings Bank, as trustee. In 1923 it was transferred to United States Copper Company. Surface work commenced in 1923. An adit was driven on the Dwight and Rodgers claims and shaft sinking began on Dwight in 1924. Sinking continued for several years, reaching a final depth of at least 15 m (50 ft) (Lucille Lake Mining Engineering File). The property itself was quiescent for many years, though changes in the claim status occurred. These changes are tabulated below:

Year	Activity
1926	Assigned to C.E. Lehman
1928	21-year lease L-947 issued
1945	Optioned to E. Hartnett
1947	Assigned to E. Hartnett
1950	Cancelled
1950	Shaft 1 (P 22669) staked by J. Johnson
1951-59	Surface work reported intermittantly
1953	Assigned to G. Ostry Optioned to Hudson Bay Exploration and Development Company Limited (H.B.E.D.). An electromagnetic survey found no conductors on Shaft 1.
1954	Option abandoned.
1961	Cancelled
1964	Tip 3, 8 (P 4415, 20B) staked by L.M. Gordon
1966	Cancelled

Associated minerals or products of value

NAME OF PROPERTY **FILE NO.** 754
Lucile Lake Shaft (Dwight) **N.T.S. AREA** 63K/11 NW **REF.** CU 7

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Year	Activity (cont'd)
1966	Pit 16, 17 (P 5468,9C) staked by S. Bachnick
1968	Cancelled
1969	CB 428 staked by A.T. Jacobson
1971	Cancelled
1971	CB 769 staked by A.T. Jacobson
1973	Airborne electromagnetic and magnetic surveys were done by Falconbridge Nickel Mines Limited under Airborne Permit No. 116, by Sherritt Gordon Mines Ltd. under Airborne Permit No. 114, and by H.B.E.D. under Airborne Permit No. 109 (Non-confidential Assessment File Nos. 91564, 92020, 91700)
1973	Cancelled
1973	CB 6167 staked by R. Ardron and immediately assigned to Falconbridge Nickel Mines Limited
1976	Cancelled
1980	CB 11076 (Luce 1), area 243 ha, staked by Richard G. Murray (assisted by Bruce Murray and Ron Siemens) for Ray-Dor Resources Ltd.
1982	Cancelled
1983	Luc (W 47551), area 192 ha, staked by Bruce Murray for Nao-Can Ltd.
1984	Transferred to Nor-Acme Gold Mines Limited. An option agreement was signed between Nor-Acme and Noranda Inc. which could earn a 60% interest in the property (Northern Miner, June 28, 1984). The area was examined by the Manitoba Government which carried out a rock chip sampling program; a shaft, 2 x 3 x 20 m, an adit, 10 x 1.5 x 1.5 m, and a 1-5 cm thick pyrite/chalcopyrite vein in felsic volcanic rocks, was noted (Wadien and Gale, 1984).
1986	The property may have been optioned to Marker Resources (Northern Miner, November 10, 1986 and April 13, 1987)
1986	Cancelled
1986	War 1 (P 6184E), area 192 ha, staked by W.F. Heidman for A.L. Parres Ltd. The claim was optioned to Varna Gold Inc. (formed by the merger of Marker Resources and Varna Resources).
1988	Transferred to 327884 Alberta Ltd. and then to Varna Gold Inc. on the same day. A program of prospecting, rock and soil sampling, and geological mapping was carried out: an adit sample yielded 1910 ppb Au and more than 10 000 ppm Cu.
1989	Cancelled
1989	Raw 1 (P 8481E), area 192 ha, staked by Douglas Dubray for A.L. Parres Ltd.

REFERENCES

Bruce, E.L., 1918, Amisk - Athapapuskow Lake district; Geological Survey of Canada, Memoir 105, 91p.

Davies, J.F., Bannatyne, B.B., Barry, G.S., and McCabe, H.R., 1962, Geology and mineral resources of Manitoba; Manitoba Mines and Natural Resources, Mines Branch, p. 74-75.

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Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. 90314, 91564, 91700, 92020.
b Corporation Files; Nor-Acme Gold Mines Limited.
c Mining Engineering Files; Lucile Lake Shaft.
d Mining Recording Files (The Pas); File No. 4190 (Dwight); Dominion Lease 947.

+Podolsky, T., 1958, Cranberry Portage (west half) (Descriptive Notes); Geological Survey of Canada, Map 26-1957.

Wadien, R. and Gale, G.H., 1984, Geochemistry of felsic intrusive and extrusive rocks in the Nisto Lake - Lucille Lake areas, Flin Flon, Manitoba; in Manitoba Energy and Mines, Mineral Resources, Report of Field Activities, 1984, p. 66-67.

MAP REFERENCES

Map 63K/11, Cranberry Portage, (Topographic), Scale: 1:50 000, Energy, Mines and Resources Canada (1985).

Map 2457G, Cranberry Portage, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/11e,f, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 343G, C 40 084G, Cranberry Portage, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

Maps OF87-11-3A/OF87-11-3B, (Geophysical compilations), Cranberry Portage area, Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 1726, Athapapuskow Lake region, (Geology), Scale 1:190 080 - Accompanying Memoir by Bruce (1918), Geological Survey of Canada.

MAP REFERENCES cont'd

*Map 26-1957, Cranberry Portage (west half), (Geology), Scale 1:63 360 - Accompanying Descriptive Notes by Podolsky (1958), Geological Survey of Canada.

Preliminary Map 1977 CP-3, Cranberry Portage, (Quaternary Geology), Scale 1:50 000, by V. Singhroy, Manitoba Mineral Resources Division.

Claim Map Series 63K/11NW, Scale 1:31 680, circa 1949, Mining Recording, Manitoba Mines Branch.

REMARKS

On the War 2 (P 6185E) claim, 1.75 km NE, a grab sample containing 0.2 ppm Ag and more than 10 000 ppb Au was reported (Non-confidential parts of Assessment File No. 71854).

Mineral prospects are indicated 3.6 km ESE, 7.65 km ESE, and 5.7 km NE on Map 26-1957 by Podolsky (1958).

Comp./Rev.	SMH	PA
By Date	01-78	02-90

PRODUCT Molybdenum **N.T.S. AREA** 63K/11 SW **REF.** MO 1

NAME OF PROPERTY:
Athapapuskow East Moly

OWNER OR OPERATOR AND ADDRESS

OBJECT LOCATED: Mouth of Goose River **MINING DIVISION** The Pas

Lat. 54° 33.44' Long. 101° 27.58' UNCERTAINTY: 2 km

Sec. Tp. 64 R. 27 WPM

DESCRIPTION OF DEPOSIT

Molybdenite occurs in a contact zone between Precambrian greenstone to the north and granitic rocks to the south. Ends of the zone and most of its northern side are covered by Athapapuskow Lake. Its southern contact is gradational. The zone strikes 060° for a minimum length of 76 m (250 ft). It is about 15 m (50 ft) wide.

Molybdenite appears to be related to quartz stringers, which are more abundant on the northwest side of the zone. In this area some molybdenite-bearing pegmatitic stringers were also found.

Molybdenite flakes and smears form along fractures near quartz veinlets in granite and quartz-feldspar porphyry. It also is finely disseminated in the quartz.

Pyrite was found throughout the zone. Gold was reported in assays.

HISTORY OF EXPLORATION AND DEVELOPMENT

The showing is located near the mouth of the Goose River on the south shore of the east arm of Athapapuskow Lake, approximately 6 km west of Cranberry Portage. Unfortunately, no precise location of this deposit is known, so its history cannot be traced.

Pete Stewart and Jack Murray found the showing, and they probably staked it about 1940. A newspaper clipping mentions that three chip samples assayed 0.85% MoS_2 over 1.2 m (4 ft), 1.22% MoS_2 over 3 m (10 ft), and 2.83% MoS_2 over 3.7 m (12 ft), respectively. The latter 2 samples also contained minor amounts of gold.

Associated minerals or products of value
gold.

NAME OF PROPERTY **FILE NO.** 755
Athapapuskow East Moly **N.T.S. AREA** 63K/11 SW **REF.** MO 1

REFERENCES

+Morgan, J.H., 1940, Stewart Molybdenite Showing Lake Athapapuskow; in Manitoba Mines Branch, Unpublished Information File (63K/11); also Newspaper Clipping (April 5, 1940) in same file.

Parberry, D. and Gale, G.H., 1984, Mineral deposit investigations in the Flin Flon area; Manitoba Energy and Mines, Mineral Resources, Report of Field Activities, 1984, p. 60-62.

Wadien, R. and Gale, G.H., 1984, Geochemistry of felsic intrusive and extrusive rocks in the Nisto Lake - Lucille Lake areas, Flin Flon, Manitoba; in Manitoba Energy and Mines, Mineral Resources, Report of Field Activities, 1984, p. 66-67.

MAP REFERENCES

#Map 63K/11, Cranberry Portage, (Topographic), Scale: 1:50 000, Energy, Mines and Resources Canada (1985).

Map 2457G, Cranberry Portage, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

REMARKS

Molybdenite flakes were reported in a quartz vein in granodiorite, about 10 km NNE, near Dodds Lake (Locality #41, Wadien and Gale, 1984). At nearby Otter Lake, on the Chuck 3 (W 47864) claim, is a 46 m (150 ft) wide dyke with traces of Py, Mo, Cu, Zn; Au was also noted in one pit. Mo was also found on Chuck 1 (W 47450) (Non-confidential Assessment File No. 92782). About 2.3 km SE of Dodds Lake, Mo was reported from DDH 2, on CB 2846 (Non-confidential Assessment File No. 92258). At Twin Lake, a drill core assay of trace Mo, Ni, Cu, Zn, Co, Pb was reported for DDH 2A on Joe 3 (P 3078E) (Non-confidential Assessment File No. 92484). 1% Mo was reported 4.5 km NNW on the north shore of Athapapuskow Lake (Locality #37, Parberry and Gale, 1984).

Comp./Rev.	SMH	PA
By Date	11-77	02-90

PRODUCT Zinc **N.T.S. AREA** 63K/11 NE **REF.** ZN 1

NAME OF PROPERTY:
Canada

OWNER OR OPERATOR AND ADDRESS
1990 - Granges Inc.
2300 - 885 West Georgia St.
Vancouver, British Columbia
V6C 3E8

OBJECT LOCATED: Sulphide showing **MINING DIVISION** The Pas

Lat. 54° 43.83' Long. 101° 09.30' UNCERTAINTY: 300 m

Sec. Tp. 66 R. 25 WPM

DESCRIPTION OF DEPOSIT

Sulphides occur in a body of Archean metavolcanics in sheared contact with more recent biotite granite. A stock of granite intrudes the volcanics to the north and west. A smaller block of granite is faulted against the volcanics south and east of the showing. The volcanics trend east to north-northeast and dip steeply south.

Fine-grained pyrrhotite, with lesser amounts of pyrite and chalcopyrite, constitutes "nearly the whole of the rocks" on Canada M.C. (Ventures Corporation File). Sulphides were concentrated in the shears. Sphalerite was probably present.

HISTORY OF EXPLORATION AND DEVELOPMENT

The showing occurs on the southernmost shore of Copper Lake, approximately 21 km northeast of Cranberry Portage. The railway junction at Optic Lake is 5 km northwest.

Canada M.C. (44062) was staked by R. Hassett in 1928. The following year it was optioned to Ventures Limited and some surface work was done. Ventures hired geologist E.L. Bruce to map this property and several other claims. Assays received in July, 1929 showed maximums of 0.4% Zn and 0.1% Cu from this claim. This was the highest zinc assay reported on the 48 claims under option to Ventures. Despite massive pyrrhotite, nickel assays all along the mineralized zone were nil to less than 0.1%. By September, Ventures had dropped their option. Canada was cancelled in 1931.

There were two brief restakings where no work was done:

Year	Activity
1952	Pal 6 (P 25791) staked by W. Johannesson
1955	Cancelled
1955	Pal 6 (P 36463) staked by D.J. Edwards
1957	Cancelled

Associated minerals or products of value
gold, silver, copper, nickel.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Work commenced again after Kay 37 and 42 (P 4009, 14B) were staked in 1964 by Thomas Lamb. A geological survey was made that year on behalf of Ansil Mines Limited. The old trenches were sampled, though assays are unknown (Non-confidential Assessment File No. 90292). One hole was drilled on Kay 37. Zinc assays returned nil values. Copper and nickel assays yielded maximums of 0.06% and 0.03%, respectively (Non-confidential Assessment File No. 90293; see also #47, 48, Gale et al., 1980). Kay 37 and 42 were assigned to S. Ciglen in 1965. They were cancelled three years later.

In 1973, Sherritt Gordon Mines Limited did airborne survey work over the area (Non-confidential Assessment File No. 92020).

In 1979, CB 11517 (Brunne 3) and CB 11518 (Brunne 4) were staked by Brian Porter for Kerr Addison Mines Limited (63K/11 CU 2). The claims were transferred to W. Bruce Dunlop Limited (N.P.L.) in 1983. The area was examined by the Manitoba Government in 1984 (Locality #10, Parberry and Gale, 1984).

Granges Exploration Ltd. obtained the claims in 1987. In 1988, Granges Exploration Ltd. and Mid-North Resources Limited had a 60-40 joint venture agreement to explore the area with a budget of $450 000. Grab samples were collected, and some gold values were obtained in assays. In 1989, soil sampling and drilling were carried out in the Copper Lake area. Traces of gold and silver were found in 10 of 12 shallow test drill holes (Northern Miner, January 14, 1989). Results of the drilling program included 1.7 m of 3.4 g/t (0.1 oz/ton) Au, 0.5 m of 8.9 g/t (0.259 oz/ton) Au, 377 g/t (11 oz/ton) Ag, and 1.2 m of 6.9 g/t (0.2 oz/ton) Au and 85.7 g/t (2.5 oz/ton) Ag. Hole 7 had 12.5 m (40.9 ft) of core grading 4 g/t (0.118 oz/ton) Au and 42.8 g/t (1.25 oz/ton) Ag including a 4.5 m (14.7 ft) section grading 8.4 g/t (0.245 oz/ton) Au, 96 g/t (2.8 oz/ton) Ag. Additional drilling was being planned (Northern Miner, March 13, 1989). A hole drilled 579 m (1900 ft) east of Hole 7 intersected 8.8 m (28.9 ft) of core grading 5.8 g/t (0.17 oz/ton) Au including a 1.6 m (5.24 ft) section of 19.8 g/t (0.578 oz/ton) Au (Northern Miner, April 17, 1989). Granges Exploration Ltd. changed its name to Granges Inc. in 1989.

REFERENCES

Bruce, E.L., 1918, Amisk - Athapapuskow Lake district; Geological Survey of Canada, Memoir 105, 91p.

Gale, G.H., Baldwin, D.A., and Koo, J., 1980, A geological evaluation of Precambrian massive sulphide deposit potential in Manitoba; Manitoba Energy and Mines, Mineral Resources Division, Economic Geology Report ER79-1, p. 100.

Hage, C.O., 1944, Geology of Gurney Gold Mine area, Manitoba; The Precambrian, v. 17, No. 4, p. 4-7, 25.

REFERENCES cont'd

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Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. 90292, 90293, 90294, 92020.
b Corporation Files; +Ventures Limited; Granges Exploration Ltd. (1988-89 file).
c Mining Recording Files (The Pas); File No. 7464 (Canada).

Parberry, D. and Gale, G.H., 1984, Mineral deposit investigations in the Flin Flon area; Manitoba Energy and Mines, Mineral Resources, Report of Field Activities, 1984, p. 60, 62.

Podolsky, T., 1951, Cranberry Portage (east half) (Descriptive Notes and Map); Geological Survey of Canada, Paper 51-17.

Wallace, R.C., 1919, The gold discovery at Copper Lake, northern Manitoba; Canadian Mining Journal, v. 40, No. 10, p. 731-733.

Wallace, R.C., 1920, Mining and mineral prospects in northern Manitoba; Government of Manitoba, Office of Commissioner of Northern Manitoba, Northern Manitoba Bulletin, p. 31.

Wright, J.F., 1938, Geology and mineral deposits of a part of northwest Manitoba; Geological Survey of Canada, Summary Report 1930, Part C, p. 26, 48-50.

MAP REFERENCES

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Map 2457G, Cranberry Portage, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/11g,h, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 877, Geological Survey of Canada (1981).

MAP REFERENCES cont'd

Maps OF87-11-3A/OF87-11-3B, (Geophysical compilations), Cranberry Portage area, Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 1726, Athapapuskow Lake region, (Geology), Scale 1:190 080 - Accompanying Memoir by Bruce (1918), Geological Survey of Canada.

Map 51-17, Cranberry Portage (east half), (Geology), Scale 1:40 000 - Accompanying Paper by Podolsky (1951), Geological Survey of Canada.

#Map, Ventures Limited, Copper Lake area, (Geology and Claims), Scale 1:6000; Mining Engineering Maps, Manitoba Mines Branch.

Map, Ansil Mines Limited, Brunne Lake property, (Geology and Claims), Scale 1:4800; Non-confidential Assessment File No. 90293, Manitoba Mines Branch.

Preliminary Map 1977 CP-3, Cranberry Portage, (Quaternary Geology), Scale 1:50 000, by V. Singhroy, Manitoba Mineral Resources Division.

Claim Map Series 63K/11NE, Scale 1:31 680, circa 1968, Mining Recording, Manitoba Mines Branch.

REMARKS

1. Seventeen holes were drilled by Ansil Mines Limited near Brunne Lake and Copper Lake. Maximum assays were 0.13% Cu, 0.12% Ni, 4.46 g/t (0.13 oz/ton) Au, and 9.6 g/t (0.28 oz/ton) Ag from holes on Kay 22 (Non-confidential Assessment File No. 90293). Ansil reported chalcopyrite, sphalerite, galena, bornite, and possible chalcocite along with pyrrhotite and pyrite in old trenches on the Kay and Yak claims (Non-confidential Assessment File No. 90292). No assays are reported and the mineralization is not verified.

2. About 950 m NE, DDH 17 on Pet 19 Fr. claim intersected up to 5% magnetite, 15% graphite, and 15% pyrrhotite over several sections of core (up to 8.3 m long) (Non-confidential Assessment File No. 90294).

Comp./Rev.	SMH	PA
By Date	12-77	02-90

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO.** 659

PRODUCT Copper **N.T.S. AREA** 63K/12 SE **REF.** CU 3

NAME OF PROPERTY:
Twelve Mile Islands
(CB 3939)

OWNER OR OPERATOR AND ADDRESS
1989 - Platinum Resources of
Canada Inc.
1710-390 Bay St.
Toronto, Ontario
M5H 2Y2

OBJECT LOCATED: Showing **MINING DIVISION** The Pas

Lat. 54° 31.71' Long. 101° 37.31' **UNCERTAINTY:** 200 m

Sec. Tp. 64 R. 28 WPM

DESCRIPTION OF DEPOSIT

Chalcopyrite occurs in Precambrian rhyolite tuff along a contact with basalt. It was also reported in intermediate dacite tuff composed of cherty dacite tuff with narrow chlorite-sericite bands. The main structural feature is a complex, folded anticlinorium. Uplift in this local area has exposed the basal members of a volcanic series (Non-confidential Assessment File No. 92016 and Pronto Explorations, Corporation File).

HISTORY OF EXPLORATION AND DEVELOPMENT

The showing occurs on an island near the southeastern shore of Athapapuskow Lake, approximately 5.4 km southeast of the railway at Limestone Narrows.

The recording, staking and exploration of the deposit has been as follows:

Year	Activity
1956	Airborne EM/MAG survey by Parrex Syndicate under Airborne Permit 16 (Non-confidential Assessment File No. 91708).
1957	J.B. Aird took out Reservation 2 and assigned it to Parmlee Manitoba Mining Company Limited which then did airborne survey work in the area (Non-confidential Assessment File No. 91707).
1959	Reservation 2 expired
1959	Para 3 (P 78041) was staked by E. Ayers
1960	Assigned to J.B. Aird
1961	Cancelled
1962	Sax 3 (P 1295A) staked by P. Syme
1963	Assigned to Consolidated Panther Mines Limited
1963	Cancelled
1971	CB 3939 staked by C. Kuryliw

Kuryliw found three chalcopyrite showings (see Remarks) while prospecting in this area during 1971, possibly under the auspices of International Mine Services. After staking CB 3939, he geologically mapped the area. An assay of 0.45% Cu was reported.

Associated minerals or products of value
silver

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Magnetic and EM-17 surveys were made during the winter of 1972. A positive magnetic anomaly was found here as was a weak EM conductor and Kuryliw recommended diamond drilling in this vicinity (Non-confidential Assessment File No. 92016, 92574). One hole (DDH 2) was diamond drilled in 1973 but the two copper assays both yielded only 0.04% Cu; 0.7 g/t Ag, and trace Au and Zn were also reported (Non-confidential Assessment File No. 91172). CB 3939 was cancelled in 1976.

Year	Activity
1978	CB 10115, 125 ha, staked by B. McFadden (assisted by W. Hanna) for Granges Exploration Aktiebolag.
1980	Canadian Nickel Company Ltd. carried out an airborne EM/MAG survey, and Paterson Grant & Watson Limited interpreted the data (see Map 1, Fig. 7, 13, 19 in Non-confidential Assessment File No. 92473).
1981	CB 10115 cancelled.
1985	Wind 7 (P 4585E), 256 ha, staked by John D. Donald for A.L. Parres Ltd.
1987	Airborne survey reported.
1988	Cancelled.
1988	Zab 5 (P 6711E), 256 ha, staked by Ken DeGraff for Platinum Resources of Canada Inc..

REFERENCES

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Hosain, I.T., 1984, Interpretation of airborne magnetic gradiometer surveys of the area south of the Flin Flon - Snow Lake Belt (parts of NTS 63K and 63J); Manitoba Energy and Mines, Mineral Resources Division, Mines Branch, Open File Report OF84-2, 26p.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 25-36.

Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. 91172, 91707, 91708, +92016, 92473, 92574.

b Corporation Files; +Pronto Explorations Limited.

Mineral Policy Sector, Ottawa; Corporation File: "Pronto Explorations Limited".

REFERENCES cont'd

Syme, E.C., 1988, Athapapuskow Lake project; Manitoba Energy and Mines, Minerals Division, Report of Field Activities, 1988, p. 20, 30.

MAP REFERENCES

*Map 63K/12, Schist Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2453G, Athapapuskow Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/12a,b, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 347G, C 40 088G, Schist Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

Map OF84-2, South of Flin Flon - Snow Lake area, (Airborne gradiometer interpretation), Scale 1:1 000 000 - Accompanying Report by Hosain (1984), Manitoba Mines Branch.

Maps OF87-11-4A/OF87-11-4B, (Geophysical compilations), Schist Lake area, Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 42-16, Athapapuskow Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Buckham (1942), Geological Survey of Canada.

Map 807A, Athapapuskow Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Buckham (1944), Geological Survey of Canada.

#Athapapuskow Lake area, (Geology), Scale 1:253 440, in Pronto Explorations Limited, Corporation Files, Ottawa.

Preliminary Map 1988 F-4, Millwater, (Geology), Scale 1:15 840, by E.C. Syme, Manitoba Minerals Division.

Claim Map Series 63K/12 SE, Scale 1:31 680, circa 1977, Mining Recording, Manitoba Mines Branch.

REMARKS

The other two showings reported by Kuryliw are described on Mineral Inventory Cards 63 K/12 CU 5 and 63 K/11 CU 3. Pronto Explorations Limited may have controlled the property and Kuryliw may have been a consultant for this company (Pronto Explorations, Corporation File). Approximately 0.8 km northwest of the showing Pronto cut a maximum of 0.28% Cu, 0.03% Zn, 1.4 g/t Ag over 1.5 m (5 ft) in a diamond drill hole (DDH 3). Chalcopyrite, bornite, pyrite, and pyrrhotite were found in the hole. This is the best assay reported by Pronto after drilling several holes in the Twelve Mile Island area (Non-confidential Assessment File No. 91172). Marcasite was found in DDH 5, 1.8 km east of the showing.

About 5.23 km southwest, drilling on Min. Res. 43 yielded maximum assays of 0.07% Cu, 0.02% Zn, 0.03% Ni, and 2.1 g/t Ag (DDH 6, 7; Non-confidential Assessment File No. 91172).

About 3 km SSE, Hole No. 62 intersected talc chlorite schist with graphite (40-100%) and fine, disseminated chalcopyrite; Hole No. 120-2 cut schist with up to 40% pyrrhotite and graphite over lengths of up to 13.4 m (Non-confidential Assessment File No. 91707).

Comp./Rev.		SMH	PA
By Date	03-73	01-77	12-89

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO.** 661

PRODUCT Copper **N.T.S. AREA** 63K/12 SE **REF.** CU 5

NAME OF PROPERTY:
CB 3929

OWNER OR OPERATOR AND ADDRESS
1989 - Cominco Ltd.
1500-120 Adelaide St. W.
Toronto, Ontario
M5H 1T1

OBJECT LOCATED: Showing **MINING DIVISION** The Pas

Lat. 54° 32.84' Long. 101° 32.00' UNCERTAINTY: 100 m

Sec. Tp. 64 R. 27, 28 WPM

DESCRIPTION OF DEPOSIT

Disseminated chalcopyrite and pyrite were found in fine-grained Precambrian acid intrusives on the north end of the island. Diamond drilling cut small amounts of these sulphides in quartz felsite which occasionally contained remnants of greenstone and andesite (Non-confidential Assessment File No. 90358). Kuryliw reported 4.6 m (15 ft) of disseminated chalcopyrite in rhyolite and dacite tuff. The showing lies in a syncline which is part of a large, complex anticlinorium (Pronto Explorations, Corporation File and Non-confidential Assessment File No. 92016).

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit occurs on one of the larger islands off the southeastern shore of Athapapuskow Lake, approximately 7.5 km southeast of the railway at Limestone Narrows.

The staking history of the deposit is given below. When little or no work was reported on the property a table format has been used.

Year	Activity
1950	Brandt 46, 7 (P 21681, 82) staked by R. Drake and D.C. Walker, respectively
1951	Cancelled
1955	Mopa 25 (P 32945) staked by J. Bell

Magnetic and electromagnetic surveys were made in 1955 for Cyprus Exploration Corporation Limited (Non-confidential Assessment File No. 90357). A negative anomaly was located around a sulphide showing on the north shore of the island. Three holes were diamond drilled toward the anomaly and showing. Small amounts of sulphides were found in the drill cores (Non-confidential Assessment File No. 90358; Location Nos. 120-122, Bamburak, 1977).

Associated minerals or products of value

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Year	Activity (cont'd)
1956	Airborne magnetic survey done for Parrex Syndicate under Airborne Permit 16 (Non-confidential Assessment File No. 91708).
1957	Mopa 25 cancelled
1957	Airborne electromagnetic and magnetic surveys by Parmlee Manitoba Mining Company Limited under Reservation 2 (Non-confidential Assessment File No. 91707).
1959	It 22, 3 (P 75004, 5) staked by R.L. Vancoughnett and assigned to Parmlee Mining Company Limited. A 136 m (447 ft) deep drill hole was drilled on anomaly 69.C.N. (Non-confidential Assessment File No. 91707).
1960	Cancelled
1964	Lap 10 (P 4458B) staked by L.R. Law
1965	Cancelled
1971	CB 3929 staked by C. Kuryliw

Kuryliw, possibly working under the auspices of International Mines Services Limited found the showing, along with two other occurrences (see Remarks), while prospecting in 1971. After staking it, he geologically mapped the area. An assay from this showing yielded 1.06% Cu over 0.3 m (1 ft). A magnetic survey in 1972 found anomalies over all three showings. This survey was useful in tracing various geologic units. An EM-17 survey was also made in 1972 (Non-confidential Assessment File No. 92016). No drilling was done on CB 3929, but drilling by Pronto in this area yielded a maximum assay of 0.08% Cu (Non-confidential Assessment File No. 91172). CB 3929 was cancelled in 1976.

Year	Activity
1978	CB 9262, 243 ha, staked by Frank Guymer (assisted by N.H. Thurber) for Hudson Bay Exploration and Development Company Limited.
1980	Canadian Nickel Company Ltd. carried out an airborne EM/MAG survey, and Paterson Grant & Watson Limited interpreted the data (see Map 1, Fig. 7, 13, 19 in Non-confidential Assessment File No. 92473).
1981	Grouped with CB 9260, 9261. Two holes were drilled in the northeast corner of CB 9262, about 1.45 km east-northeast of this showing. DDH Res 9 intersected 39 m of graphitic argillaceous andesite tuff mineralized with chalcopyrite (trace-1%), graphite (10-20%), and pyrite (5-10%); maximum assays were 0.42% Cu, 0.2% Zn, 7.2 g/t Ag, 0.3 g/t Au. DDH Res 10 cut 11 m of hematitic andesite-dacite tuff and returned up to 3.4 g/t Ag over 2.3 m in drill core assays (Non-confidential parts of Assessment File No. 70069).
1984	3.5 km (2.18 mi) of EM survey using Apex Maxmin II with a 183 m (600 ft) coil separation and a 1777 Hz frequency; 2.7 km (1.66 mi) of magnetometer survey using a GSM-8 proton magnetometer (Non-confidential Assessment File No. 92639).
1984	Area examined by Manitoba Government (Parberry and Gale, 1984).
1986	CB 9262 cancelled.

The area was immediately restaked as Boa 11 (P 5925E), 252 ha, by W. Heidman for Cominco Ltd. which then optioned it to Arizona Platinum and Gold Inc.. The claim was grouped with six other claims in 1988.

REFERENCES

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Manitoba Mines Branch:
- a Non-confidential Assessment Files; File Nos. 90357, +90358, 91172, 91707, 91708, +92016, 92473, 92574, 92639; 70069 (Non-confidential parts).
- b Corporation Files; Pronto Explorations Limited.

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MAP REFERENCES cont'd

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Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/12a,b, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

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Maps OF87-11-4A/OF87-11-4B, (Geophysical compilations), Schist Lake area, Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 42-16, Athapapuskow Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Buckham (1942), Geological Survey of Canada.

Map 807A, Athapapuskow Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Buckham (1944), Geological Survey of Canada.

#Athapapuskow Lake area, (Geology), Scale 1:253 440, in Pronto Explorations Limited, Corporation Files, Ottawa.

Preliminary Map 1988 F-4, Millwater, (Geology), Scale 1:15 840, by E.C. Syme, Manitoba Minerals Division.

Map, Athapapuskow-Cormorant lakes area, (Location map, EM conductors and drill holes), Scale 1:63 360, in Non-confidential Assessment File No. 91707, Manitoba Mines Branch.

Claim Map Series 63K/12 SE, Scale 1:31 680, circa 1977, Mining Recording, Manitoba Mines Branch.

REMARKS

Two other showings are reported by Kuryliw (Pronto Explorations, Corporation File, Ottawa). One, in 63 K/11, assayed 0.80% Cu in acid rhyolitic tuff on the former Reservation of Mineral Rights 41. The other, on former Mineral Rights Reservation 45, assayed 0.45% Cu in intermediate dacite tuff.

Comp./Rev.		SMH	PA
By Date	03-73	01-77	12-89

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO.** 663

PRODUCT Copper **N.T.S. AREA** 63K/12 NE **REF.** CU 7

NAME OF PROPERTY:
Nisto Lake
(CB 4935)

OWNER OR OPERATOR AND ADDRESS
1989 - Bruce Murray
7 Van St.
Channing, Manitoba
R0B 0C0

OBJECT LOCATED: Trench (Showing H area) **MINING DIVISION** The Pas

Lat. 54° 41.58' Long. 101° 32' UNCERTAINTY: 200 m

Sec. 6, 7 Tp. 66 R. 27 WPM

DESCRIPTION OF DEPOSIT

The main Precambrian rock type in the area is a grey, massive, fine-grained, quartz-eye acid volcanic. A small exposure of acid fragmentals (fine lapilli) occurs in the trench, where the fragments appear strongly elongated and plunge 40° toward 020°.

A planar structure observed in the trench and on nearby outcrops has an average strike of 225° and dips 60°W.

Chalcopyrite filling thin fractures is found in trace amounts over a wide area. For some reason not yet explained, possibly the intersection of two fracture patterns, the chalcopyrite fractures are wider and more frequent in the location exposed by the trench. The chalcopyrite appears very little affected by the weathering.

HISTORY OF EXPLORATION AND DEVELOPMENT

The showing is found in the vicinity of the west end of Nisto Lake, about 4.6 km north of Provincial Trunk Highway No. 10.

In 1952 Hudson Bay Exploration and Development Company Limited (H.B.E.D.) conducted an E.M. survey over the area (Non-confidential Assessment File No. 91577). No anomalies were found and the ground was forfeited in the mid-1950's. Except for some mining claims recorded in 1964 and cancelled a year later, no further work was done on the property until a logging road was built.

In 1970 S. Bachnick staked CB 3094. He allowed it to lapse, and in 1972 restaked the property as CB 4935. After finding frequent chalcopyrite occurrences over an extensive area, the main showing was found in August 1973 by traditional prospecting and was soon after exposed by a trench several feet long. A map by S. Bachnick indicates a copper-gold-silver-malachite-bornite

Associated minerals or products of value
zinc

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

showing (Showing B) near this area (Non-confidential Assessment File No. 92688). Airborne (EM and/or MAG) surveys were carried out over the area that year by H.B.E.D., by Sherritt Gordon Mines Limited , and by Falconbridge Nickel Mines Limited, under Airborne Permit Nos. 109, 114 and 116, respectively (Non-confidential Assessment File Nos. 91700, 92020, 91564).

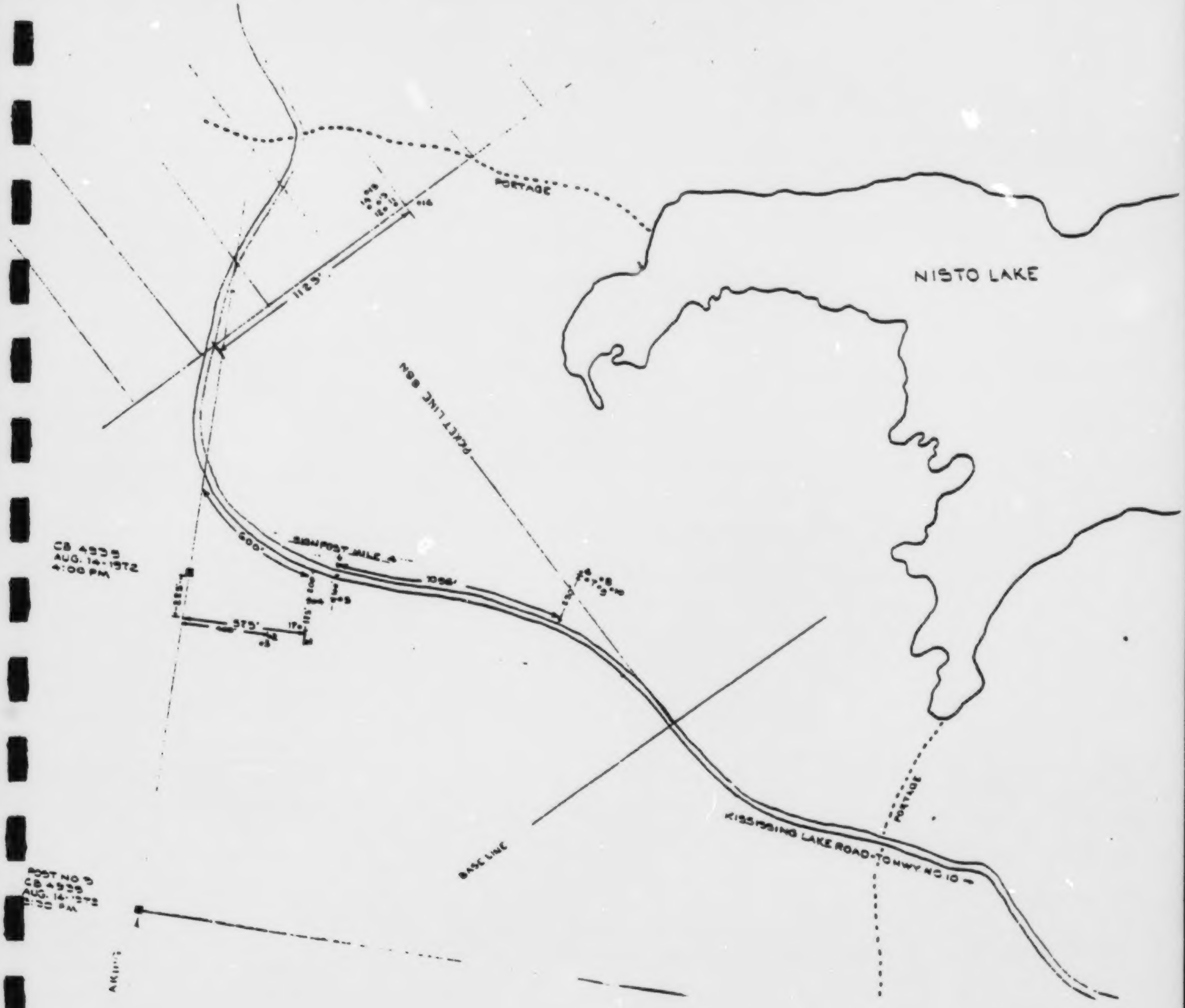
Falconbridge Nickel Mines Limited optioned the property, which was assigned to this company in 1973. Falconbridge made: bedrock mercury, geological, electromagnetic (VLF EM-16), and airborne and ground magnetic surveys, the following year. EM anomalies were noted in the 'B' showing area, located at Mile 4 of the Kississing Lake logging road. Another EM survey was carried out at 45° to the original survey lines and four anomalies were outlined: the results suggested "a narrow body, probably due to a fault or shear dipping approximately 60° south" (Non-confidential Assessment File No. 92688). CB 4935 was assigned to S. Bachnick in 1974, and a prospecting program was carried out with Philip Bachnick and Lee Gordon. Two pits (Pit No. 5: 4.8 x 1.8 x 1.5 m and Pit No. 17: 1.5 x 1.8 x 0.9 m) were put down in 1974.

In 1975, a malachite showing (Showing C) located 137 m from Showing B, in a highly jointed area, was opened up by a 15.8 x 2.1 x 1.5 m (52 x 7 x 5 ft) pit (Pit No. 1). Epidote, sericite schist, quartz, and some molybdenite, pyrite, chalcopyrite, and staurolite crystals were noted in the pit. Also reported, was a 61 cm (2 ft) wide lens (at a depth of 1.8 m) containing finely disseminated pyrite that assayed 4.16% Cu; and a 5.5 m (18 ft) length of possible ore grade Cu at the north end of the pit (Non-confidential Assessment File No. 92688). Two other samples were assayed: one returned 0.37% Cu, 0.02% Zn (Non-confidential Assessment File No. 92688). Three more pits (Pit Nos. 2, 3, 4) were opened and 6.3 m^3 of rock removed in 1975. Chalcopyrite and molybdenite was noted in one of these pits (Non-confidential Assessment File No. 92688). In 1977, Pit Nos. 4 and 5 were enlarged slightly and Pit Nos. 22 and 24 (3.9 x 1.8 x 1.2 m and 1.8 x 1.2 x 1.2 m in size) were excavated (Non-confidential Assessment File No. 92689).

On strike from the these showings, 322 m east of Mile 4 of the Kississing Lake road and approximately 244 m south of Nisto Lake, are two more showings (H & I). Five small pits (Pit Nos. 6-10) were excavated in 1975, in the vicinity of showing H where chalcopyrite had been observed.

Another showing ('G') was found 335 m NW of Nisto Lake, near the boundary with CB 4782 at approximately 533 m north of Mile 4. A large 12 m (40 ft) wide west-trending shear zone was found here. Disseminated chalcopyrite, stringers of chalcopyrite, and some pyrrhotite and pyrite were noted. The area is close to a large granodiorite body. Six small pits (Pit Nos. 11-16) were excavated in this area and 6.5 m^3 of material removed in 1975. In 1975, pit samples from 'G' returned 0.1 - 0.96% Cu, 0.03 - 0.12% Zn, and minor nickel (Non-confidential Assessment File No. 92688). (Bachnick notes in 1975, that "several pits were put in many years ago on a sulphide on the North West end of Nisto Lake, possibly by John Hobson and Bill Smith. There is magnetite, a little chalcopyrite, pyrrhotite and pyrite in these pits" (see Newspaper clipping in Manitoba Mines Branch, Unpublished Information Files, 63K).

Figure 1. Location of Pits
(Source: Non-confidential Assessment File No. 92688).


PORTAGE
1125'
NISTO LAKE
PICKET LINE 8 N
CB 4935
AUG. 14-1972
4:00 PM
600'
SIGNPOST MILE 4
1096'
575'
BASE LINE
KISSISSING LAKE ROAD-TO HWY NO 10 →
PORTAGE
POST NO 3
CB 4935
AUG. 14-1972
2:30 PM

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

In 1975, 366 m southeast of showing G and 510 m northeast of Mile 4, another showing ('E') containing sericite schist, dark green malachite stains, chalcopyrite, pyrite was noted on a small island at the west end of Nisto Lake (Non-confidential Assessment File No. 92688). A small pit (Pit No. 21) was put down in 1977 (Non-confidential Assessment File No. 92689).

Showing F consisting of chalcopyrite (disseminated or blebs), malachite and sericite schist, was noted in 1975 over a considerable area along the south shoreline of Nisto Lake, approximately 183 m northeast of 'E' (Non-confidential Assessment File No. 92688). Three pits (Pit Nos. 18-20: 2.4 x 1.2 x 1.2 m, 1.8 x 0.9 x 1.2 m, 15.2 x 1.8 x 1.8 m) were excavated in 1976 (Non-confidential Assessment File No. 92689).

These showings are found in the mercury-anomalous areas identified by Falconbridge in 1974. Pit locations are shown in Figure 1.

In 1979, a 199 m deep hole (Hole 1) was diamond drilled on CB 4935, 350 m north of Showing H, by Sherritt Gordon Mines Limited. Sphalerite (5%) was noted in the 50.6 - 50.8 m section of core; a chlorite band with garnets, pyrite (7%) and chalcopyrite (3%) assayed 0.61% Cu, 0.03% Zn over 3 cm (Non-confidential parts of Assessment File No. 99881).

In 1980, an interpretation of aeromagnetic data from the region was done by Paterson, Grant & Watson Limited, for Canadian Nickel Company Limited (see Map 1 in Non-confidential Assessment File No. 92473).

S. Bachnick carried out some prospecting and pit-work in 1980-81. Iron formation was noted along the north shore of Nisto Lake (Non-confidential Assessment File No. 92620). The area was examined by the Manitoba Government: a 30 cm-thick quartz-magnetite-chlorite vein with minor malachite and 2-3% pyrite, in a well-layered felsic tuffaceous rock was noted on the north shore of Nisto Lake; chip-sampling was carried out south of Nisto Lake (Wadien and Gale, 1984). CB 4935 was cancelled in 1986.

In 1989, Brutus 2 (P 7890E), area 240 ha, was staked for Bruce Murray.

REFERENCES

Bailes, A.H., 1971, Preliminary compilation of the geology of the Snow Lake - Flin Flon - Sherridon area; Manitoba Department of Mines and Natural Resources, Mines Branch, Geological Paper 1/71, 27p.

Baldwin, D., 1977, Disseminated base metal environments; Department of Mines, Resources and Environmental Management, Mineral Resources Division, Exploration Operations Branch, Report of Field Activities, 1976, p. 23.

Bamburak, J.D., 1977, Exploration history review of the Schist Lake area, Manitoba 63K/12; Manitoba Department of Mines, Resources & Environmental Management, Mineral Resources Division, Open File Report OF77-6, 55p.

REFERENCES cont'd

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Buckham, A.F., 1944, Athapapuskow Lake (Marginal Notes); Geological Survey of Canada, Map 807A.

Gale, G.H., Baldwin, D.A., and Koo, J., 1980, A geological evaluation of Precambrian massive sulphide deposit potential in Manitoba; Manitoba Department of Energy and Mines, Mineral Resources Division, Economic Geology Report ER79-1, p. 102.

Hosain, I.T., 1980, Summary of results of geophysical data compilation from open assessment reports Flin Flon - Snow Lake and Bird River Greenstone Belts; Manitoba Department of Energy and Mines, Mineral Resources Division, Economic Geology Paper EP79-1, p. 3.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 25-36.

Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. 91564, 91577, 91700, 92020, 92473, 92479, +92620, +92688, 92689; 99881 (Non-confidential parts).

b Unpublished Information Files; 63K.

Wadien, R. and Gale, G.H., 1984, Geochemistry of felsic intrusive and extrusive rocks in the Nisto Lake - Lucille Lake areas, Flin Flon, Manitoba; Manitoba Energy and Mines, Mineral Resources, Report of Field Activities, 1984, p. 66 - 67.

MAP REFERENCES

Map 63K/12, Schist Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2453G, Athapapuskow Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 42-16, Athapapuskow Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Buckham (1942), Geological Survey of Canada.

Map, Athapapuskow Lake Region, (Geology), Scale 1:190 080 - Accompanying Memoir by Bruce (1918), Geological Survey of Canada.

NAME OF PROPERTY **FILE NO.** 663
Nisto Lake (CB 4935) **N.T.S. AREA** 63K/12 NE **REF.** CU 7

MAP REFERENCES cont'd

*Map 807A, Athapapuskow Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Buckham (1944), Geological Survey of Canada.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Map, Neso - Nisto Lake, (Geology), Scale 1:4 800 - Accompanying Report by S. Bachnick _in_ Non-confidential Assessment File No. 92688, Manitoba Mines Branch.

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/12g,h, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 347G, C 40 088G, Schist Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

Maps OF87-11-4A/OF87-11-4B, (Geophysical compilations), Schist Lake area, Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map, Schist Lake, (Exploration history review), Scale 1: 50 000 - Accompanying Report by Bamburak (1977), Manitoba Mineral Resources Division.

Claim Map Series 63K/12 NE, Scale 1:31 680, circa 1977, Mining Recording, Manitoba Mines Branch.

REMARKS

1. Some chalcopyrite and molybdenum was reported just west of this area, on CB 4782, by S. Bachnick in 1978 (Non-confidential Assessment File No. 92479). Bachnick also reported that he found a copper showing and a molybdenum showing on the west side of Cleaver Lake in 1973 (Non-confidential Assessment File No. 92688). About 2.55 km northwest, DDH CL-1 had a maximum assay of 0.59% Zn, 0.04% Cu over 0.4 m for dacite with disseminated pyrite and pyrrhotite (Non-confidential parts of Assessment File No. 99881); an assay of 0.5% Cu over 0.2 m was noted by G. Gale (Location No. 65, Gale et al., 1980).

2. Chalcopyrite in quartz stringers was noted in the quartz monzonite between Twin Lakes and Nisto Lake (Baldwin, 1977, p. 23).

Comp./Rev.	BE	SMH	PA
By Date	09-73	01-77	01-89

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO. 664**

PRODUCT Copper **N.T.S. AREA** 63K/12 NE **REF.** CU 8

NAME OF PROPERTY:
Neso Lake
(CB 4149)

OWNER OR OPERATOR AND ADDRESS
1989 - Varna Gold Inc.
1830-801 Sixth Ave. S.W.
Calgary, Alberta
T2P 3W2

OBJECT LOCATED: Trenching (Showing A) **MINING DIVISION** The Pas

Lat. 54° 41'	Long. 101° 32.67'	UNCERTAINTY: 300 m
Sec. 1	Tp. 66	R. 27, 28 WPM

DESCRIPTION OF DEPOSIT

Grey, fine-grained, intermediate to acid volcanics occur northwest of Neso Lake. The more acid phases contain small quartz eyes. A medium to fine-grained dark grey feldspar porphyry is associated with the volcanics and has a strike of 195° and a dip of 67° W. No structure could be seen in the volcanics. Syme (1988) noted epidotized aphyric to sparsely plagioclase - phyric mafic flows (north and west of Neso Lake) that are intruded by many plagioclase - porphyry mafic dykes 0.3 - 3 m wide. Rhyolite dykes cut both the mafic flows and dykes, locally.

Several trenches cut over an area of 122 m by 30.5 m (400 x 100 ft) expose frequent stringers and scattered minor disseminations of chalcopyrite and pyrite.

As presently exposed, the copper mineralization is low and irregular and is estimated to average less than 0.25%. An irregular quartz vein with a general strike of 145° extends through the copper zone. The width varies from 0.3 to 1.5 m (1 - 5 ft) and the walls consisting of feldspar porphyry and acid volcanics are brecciated and silicified. The vein material consists of milky quartz, minor buff coloured iron carbonate, irregular amounts of pyrite, and occasional chalcopyrite and arsenopyrite. The sulphide content in the vein appears to increase within the copper zone. One selected sample with a high pyrite content was reported to assay 34.3 g/t (1.0 oz/ton) Au. Other samples from the vein apparently returned low gold values.

HISTORY OF EXPLORATION AND DEVELOPMENT

The low grade copper showings are located less than 1.6 km northwest of Neso Lake and less than 3.2 km north of Provincial Trunk Highway No. 10.

The first stakings of the deposit were made by W. Jansen in 1949 as Mistik Nos. 1 to 4 M.C. (P 21178 - P 21181). Some trenching was done in 1950. In 1952 Hudson Bay Exploration and Development Company Limited (H.B.E.D.) ran an

Associated minerals or products of value
gold, silver

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

E.M. survey on the Mistik claims but did not find any anomaly related to the showings (Non-confidential Assessment File Nos. 91577, 90321). The claims were allowed to lapse in 1954.

In 1958 W. Jansen restaked the area for Denrow Mines Limited as the Roch Nos. 1 to 4 (P 74334 - P 74337), but never did any further work. B. Wallenhaupt staked the same ground for Stall Lake Mines Limited as the Nov. Nos. 1 to 4 (P 86020 - P 86023). No assessment work was filed and the claims were forfeited the following year. Mr. Wallenhaupt restaked the Fly Nos. 1 to 4 (P 6222A - P 6225A) for himself in 1963, cut a few trenches in 1964, but allowed the claims to lapse in 1965.

In 1972 P. Bachnick staked CB 4149 to cover the same area and in 1973 cut several trenches (at least eight) on the low grade copper zone and on a quartz vein cutting through it. In May 1973, J.W. Campbell of Kerr Addison Mines completed a 4 km (2.5 mi) Crome dual frequency survey but no anomalies were found. Grab samples from the pits averaged 0.21% Cu (Non-confidential Assessment File No. 92688). Chalcopyrite and malachite was also noted 900 m southwest (see Map in Non-confidential Assessment File No. 92688). In August 1973, Noranda Exploration Company, Limited carried out a general reconnaissance survey in the area.

An airborne EM survey was done by H.B.E.D. in May - July 1973 under Airborne Permit No. 109 and some anomalies were reported (Non-confidential Assessment File No. 91700). That year airborne EM/MAG surveys were also done by Sherritt Gordon Mines Limited under Airborne Permit No. 114, and by Falconbridge Nickel Mines Limited under Airborne Permit No. 116 (Non-confidential Assessment File Nos. 92020, 91564).

The claim block was assigned to Falconbridge Nickel Mines Limited in 1973. Falconbridge made geological, magnetic, and electromagnetic surveys before assigning it back to Bachnick the following year.

In 1985, all interest in the property was transferred to Nor-Acme Gold Mines Limited. Some geological reconnaissance work was done north of Neso Lake by the Manitoba Government that year (and later in 1988) (Syme, 1985, 1988). In 1987, A.L. Parres Ltd obtained a 100% interest in the property. The property was transferred to 327884 Alberta Ltd. in February 1988, and then to Varna Gold Inc. that same day. Varna Gold Inc. was formed by the merger of Marker Resources and Varna Resources.

REFERENCES

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Manitoba Mines Branch:
a Non-confidential Assessment Files; Nos. 90321, 91564, 91577, 91700, 92020, 92620, + 92688
b Unpublished Information Files; 63K
c Mining Recording Files (The Pas); CB4149, File No. 3491B

Parberry, D, 1986, Mineral occurrence studies - Flin Flon area; Manitoba Department of Energy and Mines, Mineral Resources Division, Report of Field Activities 1986, p. 49-51, 53-54.

Syme, E.C., 1985, Athapapuskow Lake project; Manitoba Energy and Mines, Geological Services, Mines Branch, Report of Field Activities, 1985, p. 46.

Syme, E.C., 1988, Athapapuskow Lake project; Manitoba Energy and Mines, Minerals Division, Report of Field Activities, 1988, p. 20-23.

MAP REFERENCES

#Map 63K/12, Schist Lake, (Topographic), Scale 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

MAP REFERENCES cont'd

Map 2453G, Athapapuskow Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/12g,h, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 347G, C 40 088G, Schist Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

Maps OF87-11-4A/OF87-11-4B, (Geophysical compilations), Schist Lake area, Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 42-16, Athapapuskow Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Buckham (1942), Geological Survey of Canada.

*Map 807A, Athapapuskow Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Buckham (1944), Geological Survey of Canada.

Map, Geology of Flin Flon - Elbow Lake area, (Geology), Scale 1:276 472 - Figure 18 in Report by Davies et al.(1962), Manitoba Mines and Natural Resources.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Map, Neso - Nisto Lake, (Geology), Scale 1:4 800 - Accompanying Report by S. Bachnick in Non-confidential Assessment File No. 92688, Manitoba Mines Branch.

Preliminary Map 1987 F-2, Athapapuskow Lake, (Geology), Scale 1:15 840, by E.C. Syme, Manitoba Minerals Division.

Preliminary Map 1988 F-2, Bakers Narrows, (Geology), Scale 1:15 840, by E.C. Syme, Manitoba Minerals Division.

Map, Schist Lake, (Exploration history review), Scale 1:50 000 - Accompanying Report by Bamburak (1977), Manitoba Mineral Resources Division.

Claim Map Series 63K/12 NE, Scale 1:31 680, circa 1977, Mining Recording, Manitoba Mines Branch.

NAME OF PROPERTY Neso Lake (CB 4149)	**N.T.S. AREA** 63K/12 NE	**FILE NO.** 664 **REF.** CU 8

REMARKS

1. Trench located by B. Esposito who has visited the site.

2. Chalcopyrite was found across 1.2 m (4 ft) on Hobson's Choice and neighboring claims (Devlin, Neso) in 1928. The group extended eastward from a peninsula in southeast Neso Lake. Copper assays of $4.50 to $6.00; Gold 2$ (63K/12 NE, Unpublished Information File).

   On the Neso claim, a hematite showing contained some chalcopyrite in a 9.7 m (32 ft) - deep shaft. Assays of up to 103-137 g/t (3-4 oz/ton) Au and 4.5 g/t (0.13 oz/ton) Ag were reported (Non-confidential Assessment File Nos. 92688, 92620; Northern Miner June 28, 1984). Pyrite (over 50 m core length) and chalcopyrite was found in drill core from the SE and SW parts of Neso Lake (Location Nos. 70-76, 80-85, Bamburak, 1977; Gale et al., 1980).

3. Chalcopyrite and magnetite was noted near the NE end of Neso Lake, north of Mistik Creek (see Map in Non-confidential Assessment File Nos. 92688, 92620).

4. Fuchsite was found on an island in Neso lake (Parberry, 1986: 49).

Comp./Rev.	BE	SMH	PA
By Date	09-73	01-77	03-89

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO. 665**

PRODUCT Copper **N.T.S. AREA** 63K/12 NE **REF.** CU 9

NAME OF PROPERTY:
Asarco 19

OWNER OR OPERATOR AND ADDRESS
1989 - A. L. Parres Ltd.
P.O. Box 577
Flin Flon, Manitoba
R8A 1N4

OBJECT LOCATED: Island **MINING DIVISION** The Pas

Lat. 54° 38.10' Long. 101° 38.49' UNCERTAINTY: 20 m

Sec. Tp. 65 R. 28 WPM

DESCRIPTION OF DEPOSIT

Chalcopyrite occurs in quartz veins in Precambrian dacite and in pyrite veinlets in andesite. One 7.6 cm (3 ") wide quartz vein contained 40% chalcopyrite (Non-confidential Assessment File No. 90317).

HISTORY OF EXPLORATION AND DEVELOPMENT

The occurrence is located near a large island in Athapapuskow Lake between Provincial Trunk Highway 10 and the C.N. Railway. Bakers Narrows is 4.8 km north-norhwest.

Cat 83 (P 18593) was staked in 1948 by A. Peterson and was immediately assigned to J. O'Neill. A reconnaissance electromagnetic survey by Sherritt Gordon Mines Limited in 1949 failed to find anything of importance in this area (Non-confidential Assessment File No. 90322). The claim was cancelled in 1950.

Two partial restakings covered the deposit for several years. K. 1 (P 25140) was staked by S. Rapson in 1952. Surface work was reported for the two years prior to the cancellation of K. 1 in 1955. Also in 1952, M.B. Stevens staked Flie 4 (P 25626) and assigned it to D. Banks. Flie 4 was optioned to Hudson Bay Exploration and Development Company Limited (H.B.E.D.) in 1953. An electromagnetic survey in 1954 located an anomaly on this claim but the option was abandoned later that year (Non-confidential Assessment File Nos. 90329, 90339). Flie 4 was cancelled in 1956.

E. Boyes staked Asarco 19 (P 5133C) in 1966 and immediately assigned it to T.C. Osborne. It was assigned to J. Murray in 1967 and two holes, totalling 610 m (2001 ft) were drilled southeastward from a small island. The maximum assay of 0.41% Cu over 3.2 m (10.6 ft) was found between 221 m (725 ft) and 224 m (735.6 ft) core depth in the longer hole. Assays of 0.20% to 0.14% Cu across 2 to 3 m (7 to 10 ft) were also reported for this hole (Non-confidential Assessment File No. 90317; Location No. 6, Bamburak, 1977). The claim was cancelled in 1971.

Associated minerals or products of value

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

That year, Judy 4 (P 3162E) was staked by A.T. Johnson and an airborne survey was flown in the region for Cerro Mining Company of Canada, Limited (Non-confidential Assessment File No. 90350). In 1973, airborne (EM and EM/MAG) surveys were carried out by H.B.E.D. and by Sherritt Gordon Mines Limited under Airborne Permits 109 and 114, respectively (Non-confidential Assessment File Nos. 91700, 92020). In 1976, Granges Exploration Aktiebolag did a horizontal loop electromagnetic survey. An EM survey was done close to the area by H.B.E.D. in 1978 (Non-confidential Assessment File No. 92743; Hosain, 1988, p. 31).

Canadian Nickel Company Ltd. carried out an airborne EM/MAG survey in 1980, and Paterson Grant & Watson Limited interpreted the data (see Map 1, Fig. 7, 13, 19 in Non-confidential Assessment File No. 92473). The claim was cancelled in 1986.

Philip Bachnick staked Jan 3 (P 5352E) in 1986 and transferred it to A. L. Parres Ltd. in 1987. E.C. Syme (Manitoba Government) carried out geological mapping (Scale 1:15 840) that year.

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Bamburak, J.D., 1977, Exploration history review of the Schist Lake area, Manitoba 63K/12; Manitoba Department of Mines, Resources & Environmental Management, Mineral Resources Division, Open File Report OF77-6, p. 11, 14.

Bruce, E.L., 1918, Amisk-Athapapuskow Lake district; Geological Survey of Canada, Memoir 105, 91p.

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Hosain, I.T., 1984, Interpretation of airborne magnetic gradiometer surveys of the area south of the Flin Flon - Snow Lake Belt (parts of NTS 63K and 63J); Manitoba Energy and Mines, Mineral Resources Division, Mines Branch, Open File Report OF84-2, 26 p.

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Manitoba Mines Branch:

a Non-confidential Assessment Files; Nos. +90317, 90322, 90329, 90339, 90350, 91700, 92020, 92473, 92743.

b Mineral Inventory Cards; 63K/12 AU 1.

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MAP REFERENCES

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Map 2453G, Athapapuskow Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/12g,h. Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 347G, C 40 088G, Schist Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

Maps OF87-11-4A/OF87-11-4B, (Geophysical compilations), Schist Lake area, Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map OF84-2, South of Flin Flon - Snow Lake area, (Airborne gradiometer interpretation), Scale 1:1 000 000 - Accompanying Report by Hosain (1984), Manitoba Mines Branch.

MAP REFERENCES cont'd

Map 1726, Athapapuskow Lake region, (Geology), Scale 1:190 080 - Accompanying Memoir by Bruce (1918), Geological Survey of Canada.

Map 42-16, Athapapuskow Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Buckham (1942), Geological Survey of Canada.

Map 807A, Athapapuskow Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Buckham (1944), Geological Survey of Canada.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Preliminary Map 1987 F-2, Athapapuskow Lake, (Geology), Scale 1:15 840, by E.C. Syme, Manitoba Minerals Division.

Preliminary Map 1988 F-2, Bakers Narrows, (Geology), Scale 1:15 840, by E.C. Syme, Manitoba Minerals Division.

Map, Schist Lake, (Exploration history review), Scale 1:50 000 - Accompanying Report by Bamburak (1977), Manitoba Mineral Resources Division.

Claim Map Series 63K/12 NE, Scale 1:31 680, circa 1970, Mining Recording, Manitoba Mines Branch.

REMARKS

1. The island located is presumed to be the island on which drill holes were collared (Non-confidential Assessment File No. 90317).
2. Up to 2% Cu was found on the Var Group, adjacent to the Billy Boy claim (63K/12 AU 1, remarks).
3. Abundant hematite was found in drill core from the Metal 1 claim, 1 km east (Non-confidential Assessment File No. 90318, 90339; Location Nos. 8, 66, Bamburak, 1977); less than 5% pyrite and chalcopyrite with malachite staining was noted in sericite quartz schist (Location No. 40, Parberry and Gale, 1984: 61, 63).
4. About 2 km west, chalcopyrite and trace Zn, Ag, Au were reported (see 63K/12 PYR 2).

Comp./Rev.	SMH	PA
By Date	01-77	03-89

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO.** 668

PRODUCT Copper **N.T.S. AREA** 63K/12 NE **REF.** CU 12

NAME OF PROPERTY:
Chica

OWNER OR OPERATOR AND ADDRESS
1989 - W. Bruce Dunlop Limited
(N.P.L.)
201-2639 Portage Avenue
Winnipeg, Manitoba
R3J 0P7

OBJECT LOCATED: Showing **MINING DIVISION** The Pas

Lat. 54° 42.70' Long. 101° 39.95' **UNCERTAINTY:** 100 m

Sec. Tp. 66 R. 28 WPM

DESCRIPTION OF DEPOSIT

Pyrite, chalcopyrite, and probably sphalerite occur in schists in a shear between Precambrian Amisk volcanics and Missi sediments. Felsite, altered through silicification, carbonitization, and chloritization, contains chalcopyrite and is surrounded by unaltered felsite. Diamond drilling traced the zone for 305 m (1000 ft) in length and at least 107 m (350 ft) in depth. The deepest part of the deposit was calculated to be 122 m (400 ft) below surface (Non-confidential Assessment File No. 91539). The mineralized zone strikes N33°E and dips about 65° W.

A few bands of fine-grained solid sulphides, mainly pyrite, were found in a trench (Holloway, 1939). Gold and silver were reported in assays. Parberry and Gale (1984) noted 5% pyrite in 1 cm thick veinlets in sheared sericite schist in a trench.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located near the North Arm of Athapapuskow Lake on the Pineroot River, about 400 m north of its mouth. It is on Provincial Trunk Highway 10, approximately 800 m north of the Centennial Mine.

Chica (1555) was staked by Charles Rees in 1914. The claim was assigned to C.S. Power in 1917, when a pit was dug. Diamond drilling commenced the following year after Chica had been assigned to Chica Mining Company. Five holes, totalling 583 m (1911 ft) were drilled by the end of 1919 (Manitoba Mines Branch, Unpublished Information File, 63K). Another report states that 8 holes had been drilled in 1918 and 1919 (Non-confidential Assessment File No. 91579). Drilling may have encountered short sections which assayed up to 4.29% Cu and 10.3 g/t (0.30 oz/ton) Au (Manchica; Corporation File). Pits and trenches were blasted before the claim was leased as L-114 in 1921. The lease was renewed 21 years later.

Associated minerals or products of value
gold, silver, zinc.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Chica was assigned to E. Harnett and E. MacArthur in 1951, and a geological survey was made. The following year it was transferred to Manchica Mining Company Limited, of which Harnett was an officer.

A report by a consulting geologist in 1952 mentions an assay across 1.4 m (4.75 ft) in one of the trenches yielded 1.25% Cu, 0.35% Zn, 6.86 g/t (0.20 oz/ton) Au, and 27.43 g/t (0.80 oz/ton) Ag "according to earlier reports" (Manchica; Corporation File). Manchica diamond drilled 5 holes in 1952, for a total of 597 m (1959.9 ft). Copper assays from the drill core yielded 0.25% Cu across 40 cm (1.3 ft), reaching a maximum of 2.8% over 15 cm (0.5 ft). The 15 cm (0.5 ft) section of high-grade copper also gave the highest Zn assay of 0.31%. Maximums for gold and silver were 0.34 g/t (0.01 oz/ton) over 79 cm (2.6 ft) and 10.6 g/t (0.31 oz/ton) across 91 cm (3 ft), respectively (Non-confidential Assessment File No. 91539; Location No. 195, Bamburak, 1977a). Based on the geological interpretation of the results of the drilling, further work was not recommended. The mineralized zone was not expected to extend below 122 m (400 ft).

In 1961 the claim was assigned to W.H. Noble, an officer of Manchica. The lease was renewed in 1963. In 1973, airborne (EM and EM/MAG) surveys were carried out by Hudson Bay Exploration and Development Company Limited and by Sherritt Gordon Mines Limited under Airborne Permits 109 and 114, respectively (Non-confidential Assessment File Nos. 91700, 92020). The claim was cancelled in 1976.

CB 4287, 21 ha, was staked by George Lawson for A.L. Parres in 1976 and was assigned to Pinebay Mines Limited in 1977. It was cancelled in 1981.

In 1981, CB 12737 (Suzi), 25 ha, was staked by Peter Dunlop, assisted by Bob Halliday and Rod Michelle, for W. Bruce Dunlop Limited (N.P.L.). The ownership history of this claim is as follows:

Year	Holder
1982-1983	St. Joe Canada Inc.
1983-1985	W. Bruce Dunlop Limited (N.P.L.)
1985-1986	BP Resources Canada Limited
1986-1987	W. Bruce Dunlop Limited (N.P.L.)
1987-1989	Granges Exploration Ltd.
1989-present	W. Bruce Dunlop Limited (N.P.L.)

REFERENCES

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Bailes, A.H. and Syme, E.C., 1989, Geology of the Flin Flon - White Lake area; Manitoba Energy and Mines, Geological Services, Geological Report GR 87-1, p. 57-83.

REFERENCES cont'd

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Bruce, E.L., 1918, Schist Lake district, northern Manitoba; Geological Survey of Canada, Summary Report 1917, Part D, p. 2.

Bruce, E.L., 1918, Amisk-Athapapuskow Lake district; Geological Survey of Canada, Memoir 105, p. 77.

Buckham, A.F., 1942, Athapapuskow Lake (Descriptive Notes and Map); Geological Survey of Canada, Paper 42-16, 5p.

Buckham, A.F., 1944, Athapapuskow Lake (Marginal Notes); Geological Survey of Canada, Map 807A.

Campbell, J.A., 1918, Manitoba's Northland; Government of Manitoba, Office of Commissioner of Northern Manitoba, p. 19.

+Chica, File P 462; Manitoba Mines Branch, The Pas Mining Recording Files; Unpublished Information File (63K).

Holloway, J.M., 1939, Chica Mining Claim; in Manitoba Mines Branch, Unpublished Information File, 63K/10-15.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 25-36.

Manitoba Mines Branch:

a Non-confidential Assessment Files; File Nos. +91539, 91579, 91700, 92020.

b Unpublished Information Files; 63K; 63K/10-15.

c Corporation Files; Manchica Mining Company Limited.

d The Pas Mining Recording Files; +File P 462 (Chica).

Parberry, D. and Gale, G.H., 1984, Mineral deposit investigations in the Flin Flon area; Manitoba Energy and Mines, Mineral Resources, Report of Field Activities, 1984, p. 60, 63.

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REFERENCES cont'd

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Wright, J.F., 1938, Geology and mineral deposits of a part of northwest Manitoba; Geological Survey of Canada, Summary Report 1930, Part C, p. 55.

MAP REFERENCES

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Map 2453G, Athapapuskow Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/12g,h, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 347G, C 40 088G, Schist Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

Maps OF87-11-4A/OF87-11-4B, (Geophysical compilations), Schist Lake area, Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 42-16, Athapapuskow Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Buckham (1942), Geological Survey of Canada.

Map 807A, Athapapuskow Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Buckham (1944), Geological Survey of Canada.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Preliminary Map 1980 W-1, White Lake - Mikanagan Lake, (Geology), Scale 1:20 000, by A.H. Bailes and E.C. Syme, Manitoba Mineral Resources Division.

Map GR87-1-1, Flin Flon - White Lake, (Geology), Scale 1:20 000 - Accompanying Report by Bailes and Syme (1989), Manitoba Energy and Mines.

MAP REFERENCES cont'd

Map GR87-1-2, Geology of the Flin Flon - White Lake area showing mineral occurrences, alteration, and locations of analyzed samples, Scale 1:20 000 - Accompanying Report by Bailes and Syme (1989), Manitoba Energy and Mines.

Preliminary Map 1987 F-2, Athapapuskow Lake, (Geology), Scale 1:15 840, by E.C. Syme, Manitoba Minerals Division.

Preliminary Map 1988 F-2, Bakers Narrows, (Geology), Scale 1:15 840, by E.C. Syme, Manitoba Minerals Division.

Map, Schist Lake, (Exploration history review), Scale 1:50 000 - Accompanying Report by Bamburak (1977a), Manitoba Mineral Resources Division.

Claim Map Series 63K/12 NE, Scale 1:31 680, circa 1977, Mining Recording, Manitoba Mines Branch.

REMARKS

1. Assays were calculated from dollar values given in Non-confidential Assessment File No. 91539.
2. Copper was reported from the Eppa claim (M9232-9234), located to the southwest (Location No. 71, Bamburak, 1977b), and from an area 900 m northeast (Map GR 87-1-2). About 1.2 km northeast, DDH 1 returned 0.26% Cu, trace Au and 4.8 g/t Ag (Non-confidential Assessment File No. 92249).
3. About 3.3 km ESE, pyrrhotite, pyrite, magnetite, chalcopyrite noted from 53.7 m to 75.9 m in volcanic fragmentals in DDH 135; gold, covellite, sphalerite were also identified. Sections assayed trace Cu, Zn, Au, Ag (Non-confidential Assessment File No. 92147).
4. A sample assay of 0.29% Zn, 0.28% Cu, 2.7 g/t Au reported 4.65 km SE (Non-confidential Assessment File No. 92146).

Comp./Rev.	SMH	PA
By Date	01-77	11-89

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO. 669**

PRODUCT Copper **N.T.S. AREA** 63K/12 NE **REF.** CU 13

NAME OF PROPERTY:
Levasseur

OWNER OR OPERATOR AND ADDRESS
1989 - Hudson Bay Exploration and
Development Company Limited
P.O. Box 1500
Flin Flon, Manitoba
R8A 1N9

OBJECT LOCATED: Showing **MINING DIVISION** The Pas

Lat. 54° 44.41' Long. 101° 40.58' **UNCERTAINTY:** 100 m

Sec. Tp. 66 R. 28 WPM

DESCRIPTION OF DEPOSIT

Massive chalcopyrite and pyrite occur in a shear zone that is 1.83 m (6 ft) wide and was traced for 18.3 m (60 ft) before it was hidden beneath the lake. Wallace (1920, p. 26) reports sulphide stringers ranging in width from 7.62 to 76.2 cm (3 to 30").

The Precambrian country rock was described by Holloway (1939) as being metasediments which strike N15°-20°W, dipping 85° W. Map 807A indicates that the deposit is situated in a diorite intrusion into metasediments. According to Bailes and Syme (1989), "Disseminated mineralization (pyrite, chalcopyrite, malachite) occurs in sericite-chlorite schist approximately at the contact between....intermediate to mafic volcaniclastics...and interbedded mafic and felsic mudstone. The zone can be traced from the north shore of the lake, 670 m north (adjacent to old Highway 10). Massive pyrite and minor chalcopyrite is reported in shallow exploration pits along the zone.".

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located on the northeast tip of the Northeast Arm of Schist Lake. Provincial Trunk Highway 10 crosses the property approximately 10.2 km (not actual distance by road) east of Flin Flon.

Levasseur (29024) was staked by J.B. Levasseur in 1919. By 1922 G.W. Holloway and C.W. Greenlee each owned 1/4 interest in the claim, and H. Conn held 1/2 interest. Between 1919 and 1924 "shaft sinking" was reported at yearly intervals. It is not known whether this was one "shaft" that was deepened or several separate pits (Levasseur Claim File; Mining Recording, Manitoba Mines Branch). In 1925, prior to the issuance of Lease 590, J. Waldron of the Department of the Interior, Ottawa, inspected the claim. He found a shaft 1.83 x 1.83 x 7.62 m (6 x 6 x 25 ft) and "a well defined vein of copper ore", (Levasseur, Dominion File 590). Lease 590 was issued later that year. The only other work reported on the property were three old diamond drill holes reported by J.M. Holloway (Manitoba Mines Branch, Unpublished Information File), who also mentioned a shaft that was 6.1 m (20 ft) deep. The shaft was measured to 6.1 m (20 ft) in 1960, but was reported to be 11 m (35 ft) deep (Manitoba Mines Branch, Mining Engineering File).

Associated minerals or products of value

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

The more recent history of the claim is tabulated below:

Year	Activity
1942	Greenlee died. His 1/4 interest was transferred to H.A. Merkel
1947	Lease renewed
1947	Peacock's interest was assigned to Conn and Merkel
1963	All interest assigned to Hudson Bay Mining and Smelting Co., Limited
1967	Lease renewed
1973	Airborne (EM, and EM/MAG) surveys carried out by Hudson Bay Exploration and Development Company Limited (H.B.E.D.) and by Sherritt Gordon Mines Limited under Airborne Permits 109 and 114, respectively (Non-confidential Assessment File Nos. 91700, 92020).
1975	Lease converted to claim 29024
1976	Change of holder's name to H.B.E.D.
1977	Field investigation by G.H. Gale (Manitoba Government; Location No. 100, Gale et al., 1980, p. 104).

REFERENCES

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Bailes, A.H. and Syme, E.C., 1980, White Lake - Mikanagan Lake project (parts of 63K/12 and 13); Manitoba Department of Energy and Mines, Mineral Resources Division, Report of Field Activities, 1980, p. 43-47.

Bailes, A.H. and Syme, E.C., 1989, Geology of the Flin Flon - White Lake area; Manitoba Energy and Mines, Geological Services, Geological Report GR 87-1, p. 57-83, 271.

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Holloway, J.M., 1939, Le Vasseur M.C.; in Manitoba Mines Branch, Unpublished Information File, 63K/10-15.

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Levasseur, File 8030; Manitoba Mines Branch, The Pas Mining Recording Files.

+Levasseur, Dominion Lease 590; Ottawa File; Manitoba Mines Branch, The Pas Mining Recording Files.

Manitoba Mines Branch:

a Non-confidential Assessment Files; File Nos. 91700, 92020.

b Unpublished Information Files; 63K/10-15.

c Mining Engineering Files; Le Vasseur M.C..

d The Pas Mining Recording Files; +Dominion Lease 590; File 8030.

Morrice, M.G., 1974, Volcanic stratigraphy, Flin Flon; University of Manitoba, Centre for Precambrian Studies, Annual Report 1974, p. 132-138.

Syme, E.C., 1985, Athapapuskow Lake project; Manitoba Energy and Mines, Geological Services, Mines Branch, Report of Field Activities, 1985, p. 44-47.

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+Wallace, R.C., 1920, Mining and mineral prospects in northern Manitoba; Government of Manitoba, Office of Commissioner of Northern Manitoba, Northern Manitoba Bulletin, p. 26.

Wright, J.F., 1938, Geology and mineral deposits of a part of northwest Manitoba; Geological Survey of Canada, Summary Report 1930, Part C, p. 56.

MAP REFERENCES

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Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/12g,h, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 347G, C 40 088G, Schist Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

Maps OF87-11-4A/OF87-11-4B, (Geophysical compilations), Schist Lake area, Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 42-16, Athapapuskow Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Buckham (1942), Geological Survey of Canada.

#Map 807A, Athapapuskow Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Buckham (1944), Geological Survey of Canada.

Map, Geology of Flin Flon - Elbow Lake area, (Geology), Scale 1:276 472 - Figure 18 in Report by Davies et al.(1962), Manitoba Mines Branch.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Map ER79-1-15, Cormorant Lake, (Geology), Scale 1:250 000 - Accompanying Report by Gale et al.(1980), Manitoba Mineral Resources Division.

Map GR87-1-1, Flin Flon - White Lake, (Geology), Scale 1:20 000 - Accompanying Report by Bailes and Syme (1989), Manitoba Energy and Mines.

Map GR87-1-2, Geology of the Flin Flon - White Lake area showing mineral occurrences, alteration, and locations of analyzed samples, Scale 1:20 000 - Accompanying Report by Bailes and Syme (1989), Manitoba Energy and Mines.

Claim Map Series 63K/12NE, Scale 1:31 680, circa 1977, Mining Recording, Manitoba Mines Branch.

NAME OF PROPERTY Levasseur	**N.T.S. AREA** 63K/12 NE	**FILE NO.** 669 **REF.** CU 13

REMARKS

Note that Holloway, Wallace and Wright misspell the name of the claim.

The showing located on Map 807A is very slightly north of Levasseur, however it is taken to represent this deposit.

See Map GR 87-1-2 for other sulphide occurrences in this area.

Comp./Rev.	SMH	PA
By Date	01-77	11-89

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO.** 670

PRODUCT Copper **N.T.S. AREA** 63K/12 SW **REF.** CU 14

NAME OF PROPERTY:
Sam 55

OWNER OR OPERATOR AND ADDRESS
1989 - Open

OBJECT LOCATED: Centre of claim. **MINING DIVISION** The Pas

Lat. 54° 35.25' Long. 101° 45.47' **UNCERTAINTY:** 500 m

Sec. Tp. 64, 65 R. 29 WPM

DESCRIPTION OF DEPOSIT

Massive sulphides occur in Precambrian andesite, diorite, and greywacke or tuff and appear to replace greenstone. Pyrite, graphite, pyrrhotite, and chalcopyrite comprise up to 90% of the drill core in places. Fine-grained pyrite with chalcopyrite were found interstitially in greenstone breccia in the assayed section. Sphalerite was tentatively identified in several core sections (Non-confidential Assessment File No. 90359).

HISTORY OF EXPLORATION AND DEVELOPMENT

The occurrence is 2.4 km north of western Athapapuskow Lake and approximately 8.8 km south-southeast of the railway siding at Schist Lake.

S.M. 57 (P 19336) was staked by M. O'Neill in 1948. It was assigned to J. O'Neill in 1949, prior to its cancellation later that year.

Sam 55 (P 30551) was staked in 1954 by R.E. Burkett. An electromagnetic survey found a conductor on this claim. Nine holes totalling 629 m (2065 ft) were drilled on the same group in 1955, including one on Sam 55. Two holes were diamond drilled on Sam 55 in 1957 (Location Nos. 123-4, 127, Bamburak, 1977). The only assay reported gave 0.84% Cu and 0.02% Ni between 58.4 and 59.3 m (191.5 and 194.5 ft), core depth (Non-confidential Assessment File No. 90359). Later history of the property is as follows:

Year	Activity
1958	Sam 55 assigned to S.W. Evans
1961	Cancelled
1971	CB 4220 staked by Garth Burton Airborne electromagnetic survey flown by Manitoba Mineral Resources Ltd. for Cerro Mining Company of Canada Limited (Non-confidential Assessment File No. 90350).

Associated minerals or products of value
nickel.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Year	Activity
1972	Assigned to Cerro Mining Company of Canada Limited and optioned to Manitoba Mineral Resources Ltd. shortly thereafter
1973	An H.L.E.M. survey was done, followed by one drill hole (C-6). The hole intersected up to 70% pyrite and a 3.4 m section of coarse-grained pyrite (15%) (Non-confidential Assessment File No. 91468)
1974	Cancelled
1978	CB 6477, area 147 ha, staked by N.H. Thurber (assisted by J. Niedzielski) for Hudson Bay Exploration and Development Company Limited (H.B.E.D.)
1979	Grouped with CB 4776, 5348, P 4302E-10E, 3626E, 3629E. A 75.6 m deep drill hole intersected 4.6 m of cherty rhyolite mineralized with pyrite. An assay of 0.14% Cu over 0.6 m was reported (Non-confidential parts of Assessment File No. 99708).
1980	Ground electromagnetic survey carried out (Non-confidential parts of Assessment File No. 99859). Canadian Nickel Company Ltd. carried out an airborne EM/MAG survey, and Paterson Grant & Watson Limited interpreted the data (see Map 1, Fig. 7, 13, 19 in Non-confidential Assessment File No. 92473).
1984	Restaked as Hap 5480 (P 5480D), area 250 ha, by G. Johnstone, assisted by George Lawson, for H.B.E.D.
1986	Claim grouping with CB 5346, 13440, P 3630E, P 5499D. H.L.E.M. and total field magnetic survey done.
1987	A 101 m deep drill hole was drilled. It intersected 4.4 m of massive earthy pyrite, and graphite, and 9.7 m of dacitic flow (?) with disseminated pyrite. A trace of sphalerite was noted (Non-confidential parts of Assessment File No. 71507).
1988	Cancelled.

REFERENCES

Bailes, A.H., 1971, Preliminary compilation of the geology of the Snow Lake - Flin Flon - Sherridon area; Manitoba Department of Mines and Natural Resources, Mines Branch, Geological Paper 1/71, 27p.

Bamburak, J.D., 1977, Exploration history review of the Schist Lake area, Manitoba 63K/12; Manitoba Department of Mines, Resources & Environmental Management, Mineral Resources Division, Open File Report OF77-6, p. 18-19, 21-22, 29, 32.

Bruce, E.L., 1918, Amisk-Athapapuskow Lake district; Geological Survey of Canada, Memoir 105, 91p.

Gale, G.H., Baldwin, D.A., and Koo, J., 1980, A geological evaluation of Precambrian massive sulphide deposit potential in Manitoba; Manitoba Department of Energy and Mines, Mineral Resources Division, Economic Geology Report ER79-1, p. 102.

REFERENCES cont'd

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 28-29.

Manitoba Mines Branch:
 a Non-confidential Assessment Files; File Nos. 90322, 90350, +90359, 91468, 91584, 92473; 71507, 99708, 99859, 99890 (Non-confidential parts).

Tanton, T.L., 1941, Schist Lake (Marginal Notes); Geological Survey of Canada, Map 633A.

MAP REFERENCES

*Map 63K/12, Schist Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2453G, Athapapuskow Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Maps 21232G, 41232G, 63K/12c,d, Manitoba - Saskatchewan (Total Field and Vertical Gradient), Scale 1:20 000; GSC Open File 1626, Geological Survey of Canada (1987).

Maps C 21 260G, C 41 260G, Schist Lake, (Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1987).

Maps OF87-11-4A/OF87-11-4B, (Geophysical compilation), Schist Lake area, Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 1670, Schist Lake district, (Geology), Scale 1:126 720, by E.L. Bruce (1918), Geological Survey of Canada.

Map 1726, Athapapuskow Lake region, Manitoba and Saskatchewan, (Geology), Scale 1:190 080 - Accompanying Memoir by Bruce (1918), Geological Survey of Canada.

MAP REFERENCES cont'd

Map 633A, Schist Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Tanton (1941), Geological Survey of Canada.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Preliminary Map 1988 F-1, Schist Lake, (Geology), Scale 1:15 840, by E.C. Syme, Manitoba Minerals Division.

Map ER79-1-15, Cormorant Lake, (Geology), Scale 1:250 000 - Accompanying Report by Gale et al.(1980), Manitoba Mineral Resources Division.

Map, Schist Lake, (Exploration history review), Scale 1: 50 000 - Accompanying Report by Bamburak (1977), Manitoba Mineral Resources Division.

#Claim Map Series 63K/12SW, Scale 1:31 680, circa 1960, Mining Recording, Manitoba Mines Branch.

REMARKS

1. Bands of pyrite, 15 cm (6 in) thick, in andesite reported from DDH 8, located 450 m NNE (Location No. 126, Bamburak, 1977).

2. Graphite sections 15 cm thick and a 9.8 m section of near solid graphite reported 2.4 km NNW and 3.1 km NNE, respectively (Location Nos. 125, 205, Bamburak, 1977; Non-confidential Assessment File No. 91584). Specks of sphalerite noted in core, 4.2 km NW and massive pyrite (over 27.4 m) in drill hole, 5.25 km NW (Location Nos. 179, 182, Bamburak, 1977). Maximum drill core assays of 0.4% Zn, 0.29% Cu reported for a hole (Hap-12) drilled on CB 4776 (Non-confidential parts of Assessment File No. 99890). Graphite (85% over 36.1 m) and pyrite (up to 90% over 10.8 m) reported 5.3 -7.1 km ESE, near the town of Athapap (Location Nos. 87, 88, 105, Bamburak, 1977; Non-confidential Assessment File Nos. 90351, 90354).

3. About 5.4 km SE, DDH NAR-11-79 cut 10.5 m of pyrite (40-70%) and graphitic sediments, and returned a maximum assay of 1.0-2.0 g/t Ag, trace Zn, Cu, Au (Non-confidential Assessment File No. 92586).

Comp./Rev.	SMH	PA
By Date	01-77	12-89

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO. 671**

PRODUCT Copper **N.T.S. AREA** 63K/12 SW **REF.** CU 15

NAME OF PROPERTY:
Ant 25 Fr.

OWNER OR OPERATOR AND ADDRESS
1989 - Hudson Bay Exploration
and Development Company
Limited
P.O. Box 1500
Flin Flon, Manitoba
R8A 1N9

OBJECT LOCATED: Centre of claim **MINING DIVISION** The Pas

Lat. 54° 35.75' Long. 101° 48.35' **UNCERTAINTY:** 500 m

Sec. Tp. 65 R. 29 WPM

DESCRIPTION OF DEPOSIT

Sulphides occur in fine-grained andesite of the Amisk Group and in dacite and diorite. Chalcopyrite and sphalerite were reported in several drill holes forming maximums of 4% and 10%, respectively, by visual estimates of the core. Galena is mentioned less frequently in the drill logs. Pyrrhotite, pyrite, and graphite were present in most holes (Non-confidential Assessment File No. 92085). Silver was found in an assay.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located between the West Arm of Schist Lake and the West Arm of Athapapuskow Lake, approximately 7.5 km south of the railway siding at Schist Lake.

Sam 7 (P 30503) was staked by J. Pallanik in 1954. Some surface work was done on the property before it was assigned to S.W. Evans in 1958. It was cancelled that year.

A. Olesen staked Ant 25 Fr. (P 2600B) in 1964 and assigned it to Hudson Bay Exploration and Development Company Limited (H.B.E.D.), shortly thereafter. An electromagnetic survey found a conductor, and five holes, totalling 594 m (1948 ft) were drilled into it in 1965. Assays were only reported from one hole and these indicated a maximum of 0.78% Cu with 8.6 g/t (0.25 oz/ton) Ag, 0.3 g/t (0.01 oz/ton) Au, and trace Zn across 3.3 m (10.8 ft) (Non-confidential Assessment File No. 92085). Ant 25 Fr. was cancelled in 1967.

CB 5348 was staked by H. Guymer in 1973 and was assigned to H.B.E.D. later that year. A horizontal loop electromagnetic survey was reported in 1976. In 1980, Canadian Nickel Company Ltd. carried out an airborne EM/MAG survey, and Paterson Grant & Watson Limited interpreted the data (see Map 1, Fig. 7, 13, 19 in Non-confidential Assessment File No. 92473). The claim was grouped with several other claims in 1976, 77, 79, 81, 83 and 1986.

Associated minerals or products of value
silver, zinc, gold.

REFERENCES

Bailes, A.H., 1971, Preliminary compilation of the geology of the Snow Lake - Flin Flon - Sherridon area; Manitoba Department of Mines and Natural Resources, Mines Branch, Geological Paper 1/71, 27p.

Bruce, E.L., 1918, Amisk-Athapapuskow Lake district; Geological Survey of Canada, Memoir 105, 91p.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 34.

Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. +92085, 92473.

Tanton, T.L., 1941, Schist Lake (Marginal Notes); Geological Survey of Canada, Map 633A.

MAP REFERENCES

*Map 63K/12, Schist Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2453G, Athapapuskow Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Maps 21232G, 41232G, 63K/12c,d, Manitoba - Saskatchewan (Total Field and Vertical Gradient), Scale 1:20 000; GSC Open File 1626, Geological Survey of Canada (1987).

Maps C 21 260G, C 41 260G, Schist Lake, (Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1987).

Maps OF87-11-4A/OF87-11-4B, (Geophysical compilation), Schist Lake area, Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 1726, Athapapuskow Lake region, Manitoba and Saskatchewan, (Geology), Scale 1:190 080 - Accompanying Memoir by Bruce (1918), Geological Survey of Canada.

NAME OF PROPERTY **FILE NO.** 671
Ant 25 Fr. **N.T.S. AREA** 63K/12 SW **REF.** CU 15

MAP REFERENCES

Map 633A, Schist Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Tanton (1941), Geological Survey of Canada.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Preliminary Map 1988 F-1, Schist Lake, (Geology), Scale 1:15 840, by E.C. Syme, Manitoba Minerals Division.

#Claim Map Series 63K/12SW, Scale 1:31 680, circa 1967, Mining Recording, Manitoba Mines Branch.

REMARKS

1. Pyrite was found in porphyritic rocks on the northeastern tip of a large island in Athapapuskow Lake 3.5 km south-southeast of Ant 25 Fr. The showings appear on Map 633A. Another pyrite showing on the same map is located about 3.5 km northeast of Ant 25 Fr. on the west side of the railway.

2. Galena and nickel (0.2%) reported southeast of Ant 25 Fr. (Location Nos. 135, 136, Bamburak, 1977; Non-confidential Assessment File No. 90364). A possible chromite seam was reported on CB 3510 (Non-confidential Assessment File No. 91952).

3. About 3.03 km SSW, peridotite samples assayed 700 ppm Ni (max. 1400 ppm Ni, location not known) (Non-confidential Assessment File No. 91952).

4. About 4.1 km SSW, DDH Weep-1 cut 45.2 m of pyritic graphitic argillite and returned a maximum assay of 0.1% Ni, 0.14% Cu, 0.1% Zn. Similar mineralization in DDH Weep-2, 4.35 km SW (Non-confidential Assessment File No. 92630).

5. About 8.4 km south, DDH AP-73-2 returned 0.11% Cu over 1.5 m, 0.12% Cu over 1.4 m, and 0.11 (g/t?) Ag (Non-confidential Assessment File No. 92187).

Comp./Rev.	SMH	PA
By Date	01-77	01-90

PRODUCT Copper **N.T.S. AREA** 63K/12 NW **REF.** CU 16

NAME OF PROPERTY:
Iron Horse

OWNER OR OPERATOR AND ADDRESS
1989 -

Iron Horse No. 3

Hudson Bay Mining and
Smelting Co., Limited
P.O. Box 1500
Flin Flon, Manitoba
R8A 1N9

Wally 3 (P 7694E)

W. Bruce Dunlop Limited
(N.P.L.)
201-2639 Portage Avenue
Winnipeg, Manitoba
R3J 0P7

OBJECT LOCATED: Centre Iron Horse 3 **MINING DIVISION** The Pas

Lat. 54° 41.22' Long. 101° 47.50' UNCERTAINTY: 500 m

Sec. Tp. 66 R. 27 WPM

DESCRIPTION OF DEPOSIT

A zone of massive sulphides strike north through sheared Amisk andesite and rhyolite for a length of up to 1524 m (5000 ft). Mineralization was found over a width of 40 m (130 ft); however, true width of the zone is 4.6 to 6.1 m (15 to 20 ft). The sulphides are usually fine-grained chalcopyrite, sphalerite, pyrite, pyrrhotite, and arsenopyrite. Native copper has been reported. Gold and silver were found in assays. Disseminated copper and pyrrhotite occur at the northern end of the zone. Gabbronorite, gabbro, diorite, quartz diorite, and graphitic/pyritic mudstone have been mapped in the area (Map GR87-1-1).

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located south of Hook Lake, between Inlet Arm and Northwest Arm of Schist Lake. It is approximately 2.5 km north-northeast of the railway siding at Schist Lake.

Iron Horse 3, 6 (2156, 44355) were staked in 1928 by C.E. Hermann and W.J. Dawson, respectively and were assigned to W.B. Brooks later that year. A grab sample returned an assay of 11.89% Cu, 1.94% Zn, 51.4 g/t (1.5 oz/ton) Ag, and 1.37 g/t (0.04 oz/ton) Au (Manitoba Flin Flon Mines Limited; Corporation File). Trenching began on the two claims in 1929. Trench assays of 1% Cu, $0.30 Ag, $2.00 Au and a trace of Ni were reported to the Mining Inspector (Manitoba Flin Flon; Engineering File). Shafts were dug or blasted. By the end of 1929, five "shafts", from 1.5 to 7.6 m (5 to 25 ft) deep, are mentioned. Cross-cutting in one shaft indicated that the mineralization continued at depth (Tribune, May 21, 1929). The Toronto Star (February 16, 1929) reported that the Ontario Department of Mines had assayed surface samples which yielded 6 to 12% Cu and averaged 2% Zn.

Associated minerals or products of value
gold, silver, zinc.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

The claims may have been controlled by Manitoba Flin Flon Syndicate or Ontaba Flin Flon Syndicate. In 1930 a new company, Manitoba Flin Flon Mines Limited, apparently took over the assets of the two syndicates. Iron Horse 3 and 6 were transferred to this new company in 1930. Later that year the Free Press (April 9 or 29) stated that there were six shafts ranging up to 15 m (50 ft) deep on the property and that surface assays returned up to 7% Cu. Assays in 1933 yielded 8.52% Cu and 411 g/t (12 oz/ton) Ag.

Iron Horse 3, 6 were leased as M-333, M-336 in 1934. By this time Manitoba Flin Flon Mines Limited was in financial difficulty. Plans for diamond drilling had been postponed several times. Later in 1934 the claims were assigned to E.F. Kingston. Manitoba Flin Flon was declared to be bankrupt the following year. The claims were assigned to J.H. Bannatyne in 1937. Bannatyne Flin Flon Syndicate obtained control of the property that year, but no work is known to have been done. Over 11 278 m (37 000 ft) of trenching had been done on the property by 1937 (Manitoba Miner, April 15, 1937).

Later history of the deposit is tabulated below:

Year	Activity
1947	M-333, M-336 forfeited for non-payment of taxes. Hudson Bay Mining and Smelting Co., Limited (HBMS) bought the claims at a tax auction. Ten-year leases, M-1819, 1822, issued to HBMS.
1954-56	Geological mapping (Scale 1:12 000) by Heywood (1966).
1957	M-1822, covering Iron Horse 6, was cancelled. Twenty-one year lease M-4135, covering Iron Horse 3, issued to HBMS.
1963	Dot 2 (P 7260A) staked by A.T. Jacobson over the former Iron Horse 6. Surface work was reported on Dot 2 from 1963 to 1973.
1973	Airborne surveys (EM, and EM/MAG) carried out by Hudson Bay Exploration and Development Company Limited (H.B.E.D.) and by Sherritt Gordon Mines Limited under Airborne Permits 109 and 114, respectively (Non-confidential Assessment File Nos. 91700, 92020).
1974	Dot 2 cancelled.
1976	W 45279, area 15 ha, staked by J.J. Studer for Granges Exploration Aktiebolag to cover the former Iron Horse 6.
1977	Geophysical survey on west part of W 45279 by Granges (Non-confidential Assessment File No. 92495).
1978	W 45279 grouped with CB 7347, W 45280, W 45281. A 45 m deep drill hole on CB 7347, adjacent to west border of W 45279, returned drill core assays of up to 0.2 g/t Au, 0.5 g/t Ag, 0.03% Cu and 0.07% Zn (Non-confidential Assessment File No. 92495). Lease M-4135 covering Iron Horse 3 renewed for 21 years.
1981	Another hole on CB 7347 returned minor Au (0.05 g/t), Ag (0.5 g/t), Cu (0.02%) and Zn (0.06%) in assays (Non-confidential Assessment File No. 92499).
1983	W 45279 cancelled. It was restaked under CB 12706 (Hook), area 80 ha, by P. Dunlop (assisted by W.F. Heidman) for W. Bruce Dunlop Limited (N.P.L.).
1986	CB 12706 cancelled.
1988	CB 12706 area restaked under Wally 3 (P 7694E), area 84 ha, by P. Dunlop for W. Bruce Dunlop Limited (N.P.L.).

REFERENCES

Bailes, A.H., 1971, Preliminary compilation of the geology of the Snow Lake - Flin Flon - Sherridon area; Manitoba Department of Mines and Natural Resources, Mines Branch, Geological Paper 1/71, 27p.

Bailes, A.H. and Syme, E.C., 1989, Geology of the Flin Flon - White Lake area; Manitoba Energy and Mines, Geological Services, Geological Report GR 87-1, p. 120-136, 271.

Bamburak, J.D., 1977, Exploration history review of the Schist Lake area, Manitoba 63K/12; Manitoba Department of Mines, Resources & Environmental Management, Mineral Resources Division, Open File Report OF77-6, p. 24, 27-28.

Heywood, W.W., 1966, Ledge Lake area, Manitoba and Saskatchewan; Geological Survey of Canada, Memoir No. 337, 43p.

Hosain, I.T., 1980, Summary of results of geophysical data compilation from open assessment reports Flin Flon - Snow Lake and Bird River Greenstone Belts; Manitoba Department of Energy and Mines, Mineral Resources Division, Economic Geology Paper EP79-1, p. 3.

Manitoba Mines Branch:
a Annual Report on Mines and minerals; 2nd, p. 40; 3rd, p. 40.
b Corporation Files; +Manitoba Flin Flon Mines Limited, NW12, 63K.
c Mining Engineering Files; Ontaba Flin Flon Syndicate; Manitoba Flin Flon Mines Limited.
d Non-confidential Assessment Files; File Nos. 91700, 92020, 92495, 92499.

Syme, E.C., 1986, Schist Lake area (Athapapuskow Project); Manitoba Energy and Mines, Minerals Division, Report of Field Activities, 1986, p. 36-42.

Tanton, T.L., 1941, Schist Lake (Marginal Notes); Geological Survey of Canada, Map 633A.

MAP REFERENCES

*Map 63K/12, Schist Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2453G, Athapapuskow Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

MAP REFERENCES cont'd

Maps 21237G, 41237G, 63K/12e,f, Manitoba - Saskatchewan (Total Field and Vertical Gradient), Scale 1:20 000; GSC Open File 1626, Geological Survey of Canada (1987).

Maps C 21 260G, C 41 260G, Schist Lake, (Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1987).

Map 601A, Schist Lake, (Roads, mine shafts, mineral prospects, etc.), Scale 1:63 360, Geological Survey of Canada (1940).

Map 633A, Schist Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Tanton (1941), Geological Survey of Canada.

Map 1167A, Ledge Lake area, (Geology), Scale 1:12 000 - Accompanying Memoir by Heywood (1966), Geological Survey of Canada.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Map GR87-1-1, Flin Flon - White Lake, (Geology), Scale 1:20 000 - Accompanying Report by Bailes and Syme (1989), Manitoba Energy and Mines.

Map GR87-1-2, Geology of the Flin Flon - White Lake area showing mineral occurrences, alteration, and locations of analyzed samples, Scale 1:20 000 - Accompanying Report by Bailes and Syme (1989), Manitoba Energy and Mines.

Map, Schist Lake, (Exploration history review), Scale 1:50 000 - Accompanying Report by Bamburak (1977), Manitoba Mineral Resources Division.

#Claim Map Series 63K/12NW, Scale 1:31 680, circa 1977, Mining Recording, Manitoba Mines Branch.

REMARKS

1. The mineralized zone was reported to extend from Jean M.C. to at least the northern part of Iron Horse 6. Map 633A shows a pyrite symbol in this area.
2. A deposit of gold-bearing quartz was found by Manitoba Flin Flon Mines Limited on the City Deep claim, adjacent to the Iron Horse group on the southwest. There was interest in using the quartz as flux at the Flin Flon Smelter. Gold assays of up to $284 are reported. All assays seem to have been of grab samples (Manitoba Flin Flon Mines Limited; Corporation File).
3. Gravel pits were noted 1 km west in 1939 (Manitoba Mines Branch, Unpublished Information File, 63K/10-15). Another mineral prospect is shown 1.25 km SW, on Map 601A. Chalcopyrite was noted in core from a hole drilled 3.75 km SSW (Location No. 172, Bamburak, 1977).
4. A drill hole, 3.5 km west, intersected 25 m and 19.6 m of andesite mineralized with pyrite and pyrrhotite (Location No. 145, Bamburak, 1977). Small quartz veins carrying chalcopyrite were noted 1.95 km west (Non-confidential Assessment File No. 91848).

Comp./Rev.	SMH	PA
By Date	02-77	12-89

PRODUCT Copper **N.T.S. AREA** 63K/12 NE **REF.** CU 17

NAME OF PROPERTY:
Sourdough Bay
(S.D. 10)
(Stanmac)

OWNER OR OPERATOR AND ADDRESS
1989 - Sourdough Bay Mines Limited
900-808 West Hastings St.
Vancouver, British Columbia
V6C 3A4

OBJECT LOCATED: Centre of Claim. **MINING DIVISION** The Pas

Lat. 54° 43.52' Long. 101° 38.68' **UNCERTAINTY:** 500 m

Sec. Tp. 66 R. 28 WPM

DESCRIPTION OF DEPOSIT

Massive sulphides occur in a zone of predominantly acid volcanics of Precambrian age. The zone occurs in the Sourdough Bay Block, where it is contained between a unit of pillow breccia and overlying equigranular intermediate flows (Bailes and Syme, 1980, p. 47). Copper, zinc, silver, and gold mineralization was found by diamond drilling.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located beneath the waters of Sourdough Bay where it joins the main body of Athapapuskow Lake, approximately 19.2 km southeast of Flin Flon and 2.2 km east of Provincial Trunk Highway 10.

S.D. 10 (P 18009) was staked by J.C. MacGregor in 1948. Stanmac Limited made reconnaissance geophysical surveys over a large area near Flin Flon and found many anomalies. A series of anomalies crossing S.D. 10 were diamond drilled in 1948. One hole by Stanmac cut 2.77% Cu over 0.9 m (3 ft) (Northern Miner, March 31, 1949). Stanmac drilled several holes on S.D. 10 in an attempt to trace the mineralized zone.

The claim was optioned to Sherritt Gordon Mines, Limited, which held an 8% interest in Stanmac Limited, in 1949. That year Sherritt drilled 9 holes on this part of the property. Assays of 4.36% Cu across 1.79 m (5.9 ft) and 1.43% Cu over 7.3 m (24 ft) were reported. Zinc assays yielded up to 2.84% Zn, with 2.31% Cu, over 6.3 m (20.6 ft). Silver and minor amounts of gold were also found (Northern Miner, March 31 and April 14, 1949).

The drilling was done in joint venture with Berens River Mines Limited (72.3% owned by Newmont Mining Corporation). Sherritt Gordon Mines, Limited and Berens River Mines Limited could earn a 40% and 20% interest, respectively, in the property by spending $75 000 on exploration and development by July, 1950.

Associated minerals or products of value
zinc, silver, gold.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

According to annual reports of Berens River Mines Limited:
i) 1949 (13th Annual Report): 20 holes, totalling 3934 m (12 907 ft), drilled in the Lake Athapapuskow area found a 198 m (650 ft) long zone with one end open, averaging 1.69% Cu, 1.79% Zn, 1.09 g/t (0.032 oz/ton) Au and 29.48 g/t (0.86 oz/ton) Ag across a horizontal width of 3.65 m (12 ft).

ii) 1950 (14th Annual Report): 7 holes, totalling 1207 m (3962 ft), drilled in January 1950 but did not extend the zone; Berens River received a 20% interest in the property.

Later claim history is tabulated below:

Year	Activity
1949	Assigned to J. O'Neill
1949	Assigned to Stanmac Limited
1951	Assigned to Sourdough Bay Mines Limited (Inc. 1951)
1954	M-3608 issued
1973	Airborne surveys (EM, and EM/MAG) carried out by Hudson Bay Exploration and Development Company Limited (H.B.E.D.) and by Sherritt Gordon Mines Limited under Airborne Permits 109 and 114, respectively (Non-confidential Assessment File Nos. 91700, 92020).
1974	Optioned to H.B.E.D. (to expire March 13, 1977).
1975	Explored Area Lease applied for. Application denied.
1975	Lease M-3608 converted to claim P 18009
1976	Field observations by G. Gale (Manitoba Government).
1979	Optioned to Granges Exploration AB.
1980	Gale et al. (1980, Location No 101) report a 289 000 tonne deposit grading 1.46% Cu and 1.71% Zn, based on written communication to Sourdough Bay Mines Limited. Sourdough Bay Mines Limited is 53% controlled by Newmont Exploration of Canada Limited.

The following work was done on a 21-claim group which includes S.D. 10. It is not known what work was done on this claim.

Year	Activity
1963	Diamond drilling (1385 m; 4545 ft)
1968	Magnetic and electromagnetic surveys
1969	Diamond drilling (1792 m; 5879 ft)
1970	Geological survey
1971	Turam survey
1972	Diamond drilling (1589 m; 5213 ft)
1974-77	Diamond drilling (2452 m; 8045 ft) by H.B.E.D.
1980	Geophysical survey and diamond drilling by Granges Exploration AB
1982	Geophysical survey and diamond drilling by Granges Exploration AB

NAME OF PROPERTY
Sourdough Bay (S.D. 10)(Stanmac) **N.T.S. AREA** 63K/12 NE

FILE NO. 673
REF. CU 17

REFERENCES

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Manitoba Mines Branch:
- a Non-confidential Assessment Files; File Nos. 91700, 92020, 92268.
- b Corporation Files; +Stanmac Limited; +Berens River Mines Limited (13th, 14th Annual Reports).
- c Annual Report on Mines and Minerals; 22nd, p. 47-48, 57, 81; 23rd, p. 50, 61, 84.

Price, D.P., 1977, Geology and economic potential of the Flin Flon - Snow Lake area; University of Manitoba, Centre for Precambrian Studies, Annual Report 1977, p. 53.

MAP REFERENCES

*Map 63K/12, Schist Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2453G, Athapapuskow Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/12g,h, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 347G, C 40 088G, Schist Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

Map EP79-1-2, Flin Flon - Snow Lake, (Airborne geophysical compilation), Scale 1:1 000 000 - Accompanying Paper by Hosain (1980), Manitoba Mineral Resources Division.

Map OF87-11-4B, (Geophysical compilation), Schist Lake area, Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 42-16, Athapapuskow Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Buckham (1942), Geological Survey of Canada.

Map 807A, Athapapuskow Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Buckham (1944), Geological Survey of Canada.

MAP REFERENCES cont'd

Map, Geology of Flin Flon - Elbow Lake area, (Geology), Scale 1:276 472 - Figure 18 in Report by Davies et al.(1962), Manitoba Mines Branch.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Figure 12, Massive sulphide deposits and alteration zones in the Flin Flon area, (Geology), approx. Scale 1:200 000 - Accompanying Paper by Gale et al. (1976), Manitoba Mineral Resources Division.

Map ER79-1-15, Cormorant Lake, (Geology), Scale 1:250 000 - Accompanying Report by Gale et al.(1980), Manitoba Mineral Resources Division.

Map GR87-1-1, Flin Flon - White Lake, (Geology), Scale 1:20 000 - Accompanying Report by Bailes and Syme (1989), Manitoba Energy and Mines.

Map GR87-1-2, Geology of the Flin Flon - White Lake area showing mineral occurrences, alteration, and locations of analyzed samples, Scale 1:20 000 - Accompanying Report by Bailes and Syme (1989), Manitoba Energy and Mines.

#Claim Map Series 63K/12NE, Scale 1:31 680, circa 1977, Mining Recording, Manitoba Mines Branch.

REMARKS

1. 1968 drilling on Eppa 5 (P 1366A), 500 m to the northwest, by Guggenheim Exploration Co. Inc., intersected 13.4 m (44 ft) of dacite to rhyodacite rock containing heavy pyrite, pyrrhotite and some chalcopyrite mineralization; drill core assays ranged from trace to 0.18% Cu, trace to 0.3 g/t (0.01 oz/ton) Au, trace to 5.5 g/t (0.16 oz/ton) Ag, with one assay of 0.06% Ni (Non-confidential Assessment File No. 92268).

2. A rhyolite sample taken 1.04 km northeast, returned an assay of 1040 ppm Ba (No. 101, Bailes and Syme, 1989, p. 299).

Comp./Rev.	SMH	PA
By Date	02-77	11-89

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO. 674**

PRODUCT Copper **N.T.S. AREA** 63K/12 NW **REF.** CU 18

NAME OF PROPERTY:
Sunbeam
(R. 18)

OWNER OR OPERATOR AND ADDRESS
1989 - Hudson Bay Mining and
Smelting Co., Limited
P.O. Box 1500
Flin Flon, Manitoba
R8A 1N9

OBJECT LOCATED: Copper showing **MINING DIVISION** The Pas

Lat. 54° 42.25' Long. 101° 47.77' UNCERTAINTY: 300 m

Sec. Tp. 66 R. 29 WPM

DESCRIPTION OF DEPOSIT

Four stringers of pyrite and chalcopyrite, with some chalcocite, strike at 338° and dip 80° W along a sheared contact between Precambrian porphyritic and dioritic rocks. The mineralized zone has been traced over a length of 23 m (75 ft) and a width of 0.8 m (30"). Individual sulphide stringers have a maximum width of 0.08 m (3"). Mixed chalcopyrite and chalcocite occur as massive sulphides at the bottom of a pit where one of the veinlets flattens and broadens. Copper carbonates are found along the shear where the zone has been leached. Gabbronorite, rhyolite, micrographic leucotonalite, and volcanic flows have been mapped in the area (Map GR 87-1-1). Bailes and Syme (1983) identified a zone of prehnite-pumpellyite facies metamorphism in this area.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit occurs on the west side of Hook Lake, approximately 3 km southeast of the Schist Lake Mine, and 1.25 km east of a gravel pit.

Year	Activity
1917	Sunbeam (26241) staked by E. Erikson
1917	Surface work reported
1919	Cancelled
1922	Sunrise (33644) staked by W.E. Rose
1923	Cancelled
1923	Polaris (34789) staked by W.T. Thompson
1924	Assigned to J.G. Gibson. Surface work reported 1924-27, inclusive
?	Cancelled
1934	Bounty 5 (P 1987) staked by R. Beaudry

Associated minerals or products of value
(gold).

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Year	Activity
1934 or 35	Assigned to Manitoba Quebec Mines, Limited

The Northern Mail (January 10, 1935) reported chalcopyrite and $3 worth of gold on property owned by this company. It is not known whether this assay pertains to Bounty 5 (see 63 K/12 NW; PYR 3).

Year	Activity
1937	Cancelled
1937	S.S. 1 (P 4139) staked by W.B. Scarth
1939	Cancelled
1940	R. 18 (P 5563) staked by J. A. Haskin and assigned to Hudson Bay Exploration and Development Company Limited (H.B.E.D.). A claim to the north (R. 12) was drilled in 1941. R. 18 was drilled in 1943.
by 1944	Geological survey and 46 m (150 ft) diamond drill
1944	M-1445 Order-in-Council Lease
1944	Assigned to Hudson Bay Mining and Smelting Co., Limited
1965	Lease renewed.
1973	Airborne surveys (EM, and EM/MAG) carried out by H.B.E.D. and by Sherritt Gordon Mines Limited under Airborne Permits 109 and 114, respectively (Non-confidential Assessment File Nos. 91700, 92020).
1984	Three trenches (9 x 7 m; 10 x 6 m; 3.5 x 1.8 m) examined by the Manitoba Government (Parberry and Gale, 1984).
1986	Lease renewed.

REFERENCES

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Bailes, A.H. and Syme, E.C., 1983, Flin Flon - Schist Lake project (parts of 63K-12, 13); Manitoba Department of Energy and Mines, Mineral Resources Division, Report of Field Activities, 1983, p. 23-29.

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Heywood, W.W., 1966, Ledge Lake area, Manitoba and Saskatchewan; Geological Survey of Canada, Memoir No. 337, 43p.

Manitoba Mines Branch:

a Annual Report on Mines and minerals; 14th, p. 77; 15th, p. 97, 16th, p. 101.
b Corporation Files; Manitoba Quebec Mines, Limited, NW12, 63K.
c Mining Recording Files; Jay M.C., Dominion Lease 870 (Ottawa File); File No. 19574 (R. 18).
d Non-confidential Assessment Files; File Nos. 91700, 92020.

Parberry, D. and Gale, G.H., 1984, Mineral deposit investigations in the Flin Flon area; Manitoba Energy and Mines, Mineral Resources, Report of Field Activities, 1984, p. 60, 63.

Syme, E.C., 1985, Athapapuskow Lake project; Manitoba Energy and Mines, Geological Services, Mines Branch, Report of Field Activities, 1985, p. 44-47.

Syme, E.C., 1986, Schist Lake area (Athapapuskow project); Manitoba Energy and Mines, Minerals Division, Report of Field Activities, 1986, p. 36-42.

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+Wallace, R.C., 1920, Mining and mineral prospects in northern Manitoba; Government of Manitoba, Office of Commissioner of Northern Manitoba, Northern Manitoba Bulletin, p. 26.

Wright, J.F., 1938, Geology and mineral deposits of a part of northwest Manitoba; Geological Survey of Canada, Summary Report 1930, Part C, p. 56-57.

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MAP REFERENCES cont'd

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Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Maps 21237G, 41237G, 63K/12e,f, Manitoba - Saskatchewan (Total Field and Vertical Gradient), Scale 1:20 000; GSC Open File 1626, Geological Survey of Canada (1987).

Maps C 21 260G, C 41 260G, Schist Lake, (Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1987).

Map 1726, Athapapuskow Lake region, Manitoba and Saskatchewan, (Geology), Scale 1:190 080 - Accompanying Memoir by Bruce (1918b), Geological Survey of Canada.

Map 601A, Schist Lake, (Roads, mine shafts, mineral prospects, etc.), Scale 1:63 360, Geological Survey of Canada (1940).

#Map 633A, Schist Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Tanton (1941), Geological Survey of Canada.

Map, Geology of Flin Flon - Elbow Lake area, (Geology), Scale 1:276 472 - Figure 18 in Report by Davies et al.(1962), Manitoba Mines Branch.

Map 1167A, Ledge Lake area, (Geology), Scale 1:12 000 - Accompanying Memoir by Heywood (1966), Geological Survey of Canada.

Map GR87-1-1, Flin Flon - White Lake, (Geology), Scale 1:20 000 - Accompanying Report by Bailes and Syme (1989), Manitoba Energy and Mines.

Map GR87-1-2, Geology of the Flin Flon - White Lake area showing mineral occurrences, alteration, and locations of analyzed samples, Scale 1:20 000 - Accompanying Report by Bailes and Syme (1989), Manitoba Energy and Mines.

Map, Schist Lake, (Exploration history review), Scale 1:50 000 - Accompanying Report by Bamburak (1977), Manitoba Mineral Resources Division.

Claim Map Series 63K/12NW, Scale 1:31 680, circa 1977, Mining Recording, Manitoba Mines Branch.

NAME OF PROPERTY
Sunbeam (R. 18)

N.T.S. AREA 63K/12 NW

FILE NO. 674
REF. CU 18

REMARKS

1. Copper was also indicated east of the north end of Hook Lake (Wallace, 1920). An assay of 6.5 g/t (0.19 oz/ton) Ag, 0.3 g/t (0.01 oz/ton) Au was reported (Location No. 225, Bamburak, 1977). Fuchsite was noted in drill core (Location No. 165, Bamburak, 1977).
2. Another mineral prospect is shown 1 km north, on Map 633A.
3. A diorite sample from the south end of Hook Lake returned an assay of 690 ppm Cr (Location No. 171, Bailes and Syme, 1989, p. 308).
4. A drill hole, 1.75 km west, intersected 27 m and 21 m of acid flow rocks mineralized with pyrite (Location No. 144, Bamburak, 1977). A 0.6 x 1.2 x 1.2 m sample of solid sulphide (pyrite, pyrrhotite, chalcopyrite, hematite) reported on C.R. 8 (Non-confidential Assessment File No. 91848).
5. About 3.5 km east-northeast, two minor showings of disseminated pyrrhotite, pyrite, chalcopyrite reported (Non-confidential Assessment File No. 90376).

Comp./Rev.	SMH	PA
By Date	02-77	12-89

PRODUCT Copper **N.T.S. AREA** 63K/12 SE **REF.** CU 19

NAME OF PROPERTY:
Anomaly-68 B

OWNER OR OPERATOR AND ADDRESS
1989 - Cominco Ltd.
1500-120 Adelaide St. W.
Toronto, Ontario
M5H 1T1

OBJECT LOCATED: Drill hole, 68 B-1 **MINING DIVISION** The Pas

Lat. 54° 31.72' Long. 101° 32.98' **UNCERTAINTY:** 500 m

Sec. Tp. 64 R. 28 WPM

DESCRIPTION OF DEPOSIT

Specks and fine stringers of chalcopyrite were noted in silicified, carbonatized chloritic schist, probably derived from Precambrian andesite. Scattered grains and thin veinlets of chalcopyrite and pyrite were reported occasionally between 48 m (157 ft) and 143 m (468 ft) of the core depth. Drilling penetrated 21 m (69 ft) of overburden and Paleozoic rocks before reaching the Precambrian (Non-confidential Assessment File No. 91707).

HISTORY OF EXPLORATION AND DEVELOPMENT

Copper was found beneath Paleozoic rocks near the eastern shore of the South Bay of Athapapuskow Lake. The railway at Millwater is 8.2 km northwest. Bakers Narrows on Provincial Trunk Highway 10 is 18.2 km northwest.

Mop 68, 69 (P 35102, 3) were staked by T. Wasyliuk in 1955 and cancelled the following year. In 1956, an airborne magnetic survey was done for Parrex Syndicate under Airborne Permit 16 (Non-confidential Assessment File No. 91708).

J.B. Aird took out Reservation 2 in 1957 and assigned it to Parmlee Manitoba Mining Company Limited. Airborne magnetic and electromagnetic surveys were made that year. After follow-up ground geophysical surveys, three holes were drilled on anomaly 68 B. A 143 m (468 ft) hole, 68 B-1, yielded 0.6% Cu, 0.3 g/t Au, trace Ag over 0.8 m (2.5 ft). This was the highest copper assay found during work on Reservations 2-6 (Non-confidential Assessment File No. 91707). The reservation expired and the ground was reopened in 1959.

The following dispositions approximately covered the drill site:

Year	Activity
1959	Parb 5, 6, 22, 23 (P 78491, 2, 508, 509) staked by E. Ayers, J.J. Johnson, and J. Mitchell Assigned to J.B. Aird
1960	Cancelled

Associated minerals or products of value
gold, silver.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Year	Activity
1966	Ground electromagnetic and magnetic survey by Jack F.P. Silman on Geophysical Reservation No. 29 (Non-confidential Assessment File No. 91744).
1971	CB 3933 staked by C.J. Kuryliw
1973-74	Airborne electromagnetic survey by Hudson Bay Exploration and Development Company Limited under Airborne Permit 119 (Non-confidential Assessment File No. 92080).
1976	CB 3933 cancelled
1979	CB 9223 (STC.15), area 223 ha, and CB 9224 (STC.16), area 243 ha, staked by J. Jerome Studer (assisted by W.T. Hanna) for Granges Exploration Aktiebolag.
1980	Canadian Nickel Company Ltd. carried out an airborne EM/MAG survey, and Paterson Grant & Watson Limited interpreted the data (see Map 1, Fig. 7, 13, 19 in Non-confidential Assessment File No. 92473).
1981	CB 9223, 4 cancelled.
1985	Boa 2 (P 5571E), 204 ha, staked by R.W. Kipling for Cominco Ltd.
1986	Option agreement with Arizona Platinum and Gold Inc.
1989	Grouped with eight other claims.

REFERENCES

Hosain, I.T., 1984, Interpretation of airborne magnetic gradiometer surveys of the area south of the Flin Flon - Snow Lake Belt (parts of NTS 63K and 63J); Manitoba Energy and Mines, Mineral Resources Division, Mines Branch, Open File Report OF84-2, 26p.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 35.

Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. 91172, +91707, 91708, 91744, 92080, 92473.

b Corporation Files; Parmlee Manitoba Mining Company Limited.

Syme, E.C., 1988, Athapapuskow Lake project; Manitoba Energy and Mines, Minerals Division, Report of Field Activities, 1988, p. 20, 30.

MAP REFERENCES

Map 63K/12, Schist Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

MAP REFERENCES cont'd

Map 2453G, Athapapuskow Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/12a,b, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 347G, C 40 088G, Schist Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

Map OF84-2, South of Flin Flon - Snow Lake area, (Airborne gradiometer interpretation), Scale 1:1 000 000 - Accompanying Report by Hosain (1984), Manitoba Mines Branch.

Maps OF87-11-4A/OF87-11-4B, (Geophysical compilations), Schist Lake area, Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map, Athapapuskow-Cormorant lakes area, (Location map, EM conductors and drill holes), Scale 1:63 360, in Non-confidential Assessment File No. 91707, Manitoba Mines Branch.

Claim Map Series 63K/12 SE, Scale 1:31 680, circa 1977, Mining Recording, Manitoba Mines Branch.

REMARKS

8 km SE, on CB 7157 (Reservation 118, NTS 63K/6NW), drill hole P-75-4 intersected 36.5 m (120 ft) of disseminated chalcopyrite and pyrite in tuff; trace Au, Zn, Cu (up to 0.25%), Ag (5.49 g/t) were reported in assays (Non-confidential Assessment File No. 92574, 92577).

Other holes in this area (63K/5NE, 6NW) had traces of chalcopyrite reported over 12.3 m in graphitic sediment and over 13 m in quartz-carbonate fractures (DDH P-77-2); over 3.8 m in tuff (DDH P-77-4); over 25.3 m in tuff (DDH P-77-6) and over 7 m in DDH P-77-5. Pyritic bands over 2.7 m and 9.1 m long sections of core also reported (Non-confidential Assessment File No. 92574).

Comp./Rev.	SMH	PA
By Date	11-77	12-89

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO.** 1016

PRODUCT Copper **N.T.S. AREA** 63K/12 NE **REF.** CU 20

NAME OF PROPERTY:
Clove 1

OWNER OR OPERATOR AND ADDRESS
1989 - Ray-Dor Resources Ltd.
P.O.Box 98
Flin Flon, Manitoba
R8A 1M6

OBJECT LOCATED: Pit (on Bond 14) **MINING DIVISION** The Pas

Lat. 54° 43.59' Long. 101° 34.0' **UNCERTAINTY:** 300 m

Sec. 23 Tp. 66 R. 28 WPM

DESCRIPTION OF DEPOSIT

Rock types encountered in drilling include andesite, dacite, and some rhyolite, quartz porphyry, andesite porphyry, and amygdaloidal dacite. Mineralization consists mainly of pyrrhotite, pyrite, with some chalcopyrite, graphite and rare marcasite. One drill hole intersected 3 sections of massive sulphide, ranging from 0.5 m to 2.1 m in length. A gabbroic intrusion is indicated on Map 807A. A fault strikes 083° in this area.

HISTORY OF EXPLORATION AND DEVELOPMENT

The area is located 1.17 km northwest of Cleaver Lake, 2.09 km southwest of Pothook Lake, and 824 m south of a northeast-trending lake. It is near a hydro transmission line.

The area was first staked as Bond 14 (P 11583) by E.T. Hartnett in 1946. Work was reported on the property in 1947. In 1948, Amber 2 (P 19108) was staked by J. Stewart McDiarmid and was transferred to Hudson Bay Exploration and Development Company Limited (H.B.E.D.). In 1949, H.B.E.D. acquired the Bond 14 claim.

That year, 5 holes totalling 678 m (2224 ft) were drilled on Amber 2 (Non-confidential Assessment File No. 90320; Location Nos. 22-26, Bamburak, 1977, p. 12-13; Location No. 63, Gale et al., 1980). The holes intersected mainly dacite, and some rhyolite, quartz porphyry and sheared andesite. Mineralization consisted of slight pyrite, pyrrhotite and chalcopyrite and several well-mineralized to near solid sulphide sections of pyrrhotite and pyrite. Marcasite was noted in core from one of the holes. Similar results were obtained for holes drilled on the Bond 3 and 18 claims (Location Nos. 16-21, 27-28, Bamburak, 1977).

In 1950, Capital Mining Syndicate (NPL) acquired the Bond 14 claim. It is not known what work was done. Both the Bond 14 and Amber 2 claims were cancelled that year.

Associated minerals or products of value
zinc, silver, gold.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

In 1970, CB 2833 was staked by Glenn Hogarth and assigned to H.B.E.D. which did a Turam electromagnetic survey over the claim block in 1972 (Non-confidential Assessment File No. 92255). In 1973, airborne surveys (EM, and EM/MAG) were carried out by H.B.E.D. and by Sherritt Gordon Mines Limited under Airborne Permits 109 and 114, respectively (Non-confidential Assessment File Nos. 91700, 92020). CB 2833 was cancelled in 1973.

Steve Bachnick (assisted by Philip Bachnick) staked Clove 1 (CB 10396), area 130 ha, in 1979 and carried out some prospecting, overburden stripping and rock trenching in 1980-1981. Bachnick noted much rust in the area, as well as iron formation that was mineralized with pyrite and some chalcopyrite. Eleven samples were sent for assay. Results were as follows (Non-confidential Assessment File No. 92620):

Sample No.	Au (g/t)	Ag (g/t)	%Cu	%Zn	%Ni	Sample Weight (kg)
D6522*	Trace	Trace	27.40	0.13		0.23
D6523	1.03	6.51				0.34
D6524	Trace	4.79	1.42	0.02		0.57
D6818	Trace	-	0.05			0.34
D6819	Trace	1.37				0.45
D6820	2.74	10.29	4.00			0.34
D6825	2.06	3.43	1.50			0.45
D6460					0.02	0.57
D6468	Trace	Trace				0.23
D6469	Trace	Trace				0.23
D6470	-	-	-	-	-	

* massive chalcopyrite sample.

Clove 1 (CB 10396) was grouped with CB 10402 in 1980 and with CB 6375, CB 10402, and CB 11025 in 1984. Clove 1 was restaked as Clove 18 (P 5307E), area 192 ha, by Philip Bachnick (assisted by S. Bachnick and W. Heidman) in 1985. The claim was cancelled in 1987.

In 1988, Brian Murray staked Liv 3 (P 6624E), area 240 ha, for Ray-Dor Resources Ltd.

REFERENCES

Bailes, A.H., 1971, Preliminary compilation of the geology of the Snow Lake - Flin Flon - Sherridon area; Manitoba Department of Mines and Natural Resources, Mines Branch, Geological Paper 1/71, 27p.

Bamburak, J.D., 1977, Exploration history review of the Schist Lake area, Manitoba 63K/12; Manitoba Department of Mines, Resources & Environmental Management, Mineral Resources Division, Open File Report OF77-6, p. 11-13, 30-31.

REFERENCES cont'd

Buckham, A.F., 1942, Athapapuskow Lake (Descriptive Notes and Map); Geological Survey of Canada, Paper 42-16, 5p.

Buckham, A.F., 1944, Athapapuskow Lake (Marginal Notes); Geological Survey of Canada, Map 807A.

Gale, G.H., Baldwin, D.A., and Koo, J., 1980, A geological evaluation of Precambrian massive sulphide deposit potential in Manitoba; Manitoba Department of Energy and Mines, Mineral Resources Division, Economic Geology Report ER79-1, p. 101.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 25-36.

Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. 90209, 90315, 90316, 90320, 91700, 92020, 92255, +92620, 92750.

Wadien, R. and Gale, G.H., 1984, Geochemistry of felsic intrusive and extrusive rocks in the Nisto Lake-Lucille Lake areas, Flin Flon, Manitoba; Manitoba Energy and Mines, Mineral Resources, Report of Field Activities, 1984, p. 66-67.

MAP REFERENCES

Map 63K/12, Schist Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2453G, Athapapuskow Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/12g,h, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 347G, C 40 088G, Schist Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

MAP REFERENCES cont'd

Maps OF87-11-4A/OF87-11-4B, (Geophysical compilation), Schist Lake area, Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 42-16, Athapapuskow Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Buckham (1942), Geological Survey of Canada.

Map 807A, Athapapuskow Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Buckham (1944), Geological Survey of Canada.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Map ER79-1-15, Cormorant Lake, (Geology), Scale 1:250 000 - Accompanying Report by Gale et al.(1980), Manitoba Mineral Resources Division.

Map, Schist Lake, (Exploration history review), Scale 1: 50 000 - Accompanying Report by Bamburak (1977), Manitoba Mineral Resources Division.

#Claim Map Series 63K/12NE, Scale 1:31 680, circa 1981, Mining Recording, Manitoba Mines Branch, in Non-confidential Assessment File No. 92620.

REMARKS

1. A drill hole (in 1951) intersected several sections of near solid sulphide, pyrrhotite and some chalcopyrite, 1.24 km south of this area (Non-confidential Assessment File Nos. 90315, 90316, 90209; Location Nos. 2-5, 194, Bamburak, 1977). About 1.6 km SE, DDH CLE-1 intersected 6.6 m of pyrite, magnetite, trace sphalerite, chalcopyrite in rhyodacite tuff and returned maximum assays of 0.6% Zn, 0.11% Cu (Non-confidential Assessment File No. 92567). 2.4 km SW, DDH SL 8-79 intersected pyrrhotite (up to 75%), minor chalcopyrite and sphalerite, and returned maximum assays of 0.35% Zn, 0.32% Cu, 0.5 g/t Ag, 0.05 g/t Au (Non-confidential Assessment File No. 92379).

2. In 1980-81, a float sample grading 8% Cu was found 2 km ENE of this area, 444 m south of Pothook Lake (Non-confidential Assessment File No. 92620).

3. In 1984, gold (up to 6.17 g/t), zinc, and copper (1.5%) were reported on Clove 7 (CB 11025), located 1.24 km NE of this area (Non-confidential Assessment File No. 92750). Wadien and Gale (1984, Location No. 58) noted quartz-sulphide veinlets with 4-5% pyrite, 1% chalcopyrite, and some gold along the NW margin of a quartz-feldspar porphyritic intrusion with blue quartz phenocrysts up to 1 cm in diameter.

Comp./Rev.	PA
By Date	11-89

PRODUCT Copper **N.T.S. AREA** 63K/12 SE **REF.** CU 21

NAME OF PROPERTY:
Mink Narrows
(Copper Reef)

OWNER OR OPERATOR AND ADDRESS
1989 - Copper Reef Mines (1973)
Limited
P.O. Box 40
Commerce Court West
Toronto, Ontario
M5L 1B4

OBJECT LOCATED: Copper occurrence **MINING DIVISION** The Pas

Lat. 54° 37.00' Long. 101° 35.25' UNCERTAINTY: 200 m

Sec. Tp. 65 R. 28 WPM

DESCRIPTION OF DEPOSIT

Disseminated and massive sulphides were found in andesite and altered andesite of the Amisk Group. Pyrite and pyrrhotite were associated with, and usually more common than, chalcopyrite and sphalerite. These last two sulphides usually occurred at drill core depths of 91 to 274 m (300 to 900 ft) (Non-confidential Assessment File No. 90360). A steeply dipping orebody striking 065° in basaltic metavolcanic flow rocks, was outlined to a depth of 536 m (1760 ft) with an estimated tonnage of 456 443 tonnes (503 000 tons) averaging 1.5% Cu, 0.5% Zn (Solonyka, 1974).

Buckham (1944) reports that massive sulphides (pyrite, pyrrhotite and chalcopyrite) were found along the contact between andesite and porphyritic granodiorite on Copper Reef M.C.. The lenticular body also carried low gold and silver values.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit occurs on an island in and beneath the waters of Lake Athapapuskow about 2.5 km east of Mink Narrows and 3.25 km north-northeast of the railway at Millwater.

The history of the property is complex. At times it has been covered by several claims contemporaneously. The early history is summarized and tabulated below:

Year	Activity
Pre-1930	Some claims may have been staked and recorded but details are unknown.
1936	TY 2, 3 (P 3024, P 3025) staked by A.D. Moodie.
1937-41	Surface work was reported.

Associated minerals or products of value
zinc, gold, silver.

NAME OF PROPERTY **FILE NO.** 676
Mink Narrows (Copper Reef) **N.T.S. AREA** 63K/12 SE **REF.** CU 21

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Year	Activity
1941	TY 3 cancelled.
1942	TY 2 assigned to Copper Reef Mining Syndicate.
1942	Copper Reef Extension 2 (P 6004) staked by A. Van der Brink and assigned to Copper Reef Mining Syndicate.
1942	Biddy 1 (P 6017) staked by F.J. Edworthy.
1943	Cancelled.
1944	C.R. 4, 5 (P 7313, P 7314) staked by J.A. Haskin and assigned to Copper Reef Mining Syndicate and immediately optioned to Hudson Bay Exploration and Development Company Limited (H.B.E.D.). C.R. 11, 12 (P 7320, P 7321) staked by R.S. Jones and assigned to H.B.E.D.
1945	TY 2, Copper Reef Extension 2, C.R. 11, 12 cancelled.
1948	Option abandoned.
1949	C.R. 4, 5 cancelled.

Copper Reef Mining Syndicate owned TY 2, Copper Reef Extension 2, and C.R. 4, 5, 11, and 12. Trenching on the "Copper Reef" property exposed an orebody averaging 3.25% Cu, together with low gold and silver, across 3 m (10 ft) for a length of about 18 m (60 ft) (Buckham, 1942). Diamond drilling was reported on all of these claims but most was probably done on other claims under grouping certificates. The syndicate did some drilling on Copper Reef in 1942 and on Copper Reef 1 and 2 in 1943 (Manitoba Mines Branch, 15th and 16th Annual Reports). The C.R. group was drilled by R.M. McIsaac in 1945 (Manitoba Mines Branch, 18th Annual Report).

A couple of other claims covered the deposit before it was staked as Sun 1 (P 22767) by A. Talbot in 1950. A 95 m deep hole was drilled on this claim in 1951 (Non-confidential Assessment File No. 90360). Sun 1 was optioned to H.B.E.D. in 1952, and an electromagnetic survey found a conductor on the property near the "old Copper Reef showing" (Non-confidential Assessment File No. 90353). Eight holes, totalling 2168 m (7113 ft) were drilled in 1953. Prior to the abandonment of the option in 1954 another 790 m (2591 ft) were drilled in three holes. Most of the drilling cut sulphide zones (Non-confidential Assessment File No. 90360; Location Nos. 108-115, 130-132, Bamburak, 1977). Map A-567 A indicates the locations of 37 drill holes, 9 of which had been drilled in 1943, on this claim. Sun 1 was cancelled in 1959.

Later history is as follows:

Year	Activity
1960	Copper Reef (P 80695) staked by H.L. Thompson. Some surface work reported.
1965	Cancelled.
1965	Bee 3 (P 640 C) staked by E.L. Moray.
1966	Assigned to E.M. Holden.
1968	Assigned to Falconbridge Nickel Mines, Limited, which did some diamond drilling in 1969.
1973	Assigned to Copper Reef Mines (1973) Limited. Falconbridge had an 89.2% interest in this company.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Some drilling has been reported on Bee 3 but it was probably done on C.R. 7 under a grouping certificate.

Year	Activity
1973	Airborne (EM/MAG) survey by Sherritt Gordon Mines Limited under Airborne Permit No. 114 (Non-confidential Assessment File No. 92020), and by Falconbridge Nickel Mines Limited under AP 116 (Non-confidential Assessment File No. 91564).
1980	Canadian Nickel Company Ltd. carried out an airborne EM/MAG survey, and Paterson Grant & Watson Limited interpreted the data (see Map 1, Fig. 7, 13, 19 in Non-confidential Assessment File No. 92473).

REFERENCES

Bamburak, J.D., 1977, Exploration history review of the Schist Lake area, Manitoba 63K/12; Manitoba Department of Mines, Resources & Environmental Management, Mineral Resources Division, Open File Report OF77-6, p. 20, 22.

Buckham, A.F., 1942, Athapapuskow Lake; Geological Survey of Canada, Paper 42-16, 5p.

Buckham, A.F., 1944, Athapapuskow Lake (Marginal Notes); Geological Survey of Canada, Map 807A.

Canadian Mines Handbook, 1973-1974, p. 99; 1986-1987, p. 112; Northern Miner Press Limited.

Davies, J.F., Bannatyne, B.B., Barry, G.S., and McCabe, H.R., 1962, Geology and mineral resources of Manitoba; Manitoba Department of Mines and Natural Resources, Mines Branch, p. 64-77.

Gale, G.H., Baldwin, D.A., and Koo, J., 1980, A geological evaluation of Precambrian massive sulphide deposit potential in Manitoba; Manitoba Department of Energy and Mines, Mineral Resources Division, Economic Geology Report ER79-1, p. 102.

Gale, G., Koo, J., Solkoski, L. and Southard, G., 1976, Evaluation of massive sulphide environments; in Canada - Manitoba NREP 1st Annual Report 1975/1976; Manitoba Department of Mines, Resources and Environmental Management, Mineral Resources Division, Open File Report 77/1, p. 43.

Hosain, I.T., 1984, Interpretation of airborne magnetic gradiometer surveys of the area south of the Flin Flon - Snow Lake Belt (parts of NTS 63K and 63J); Manitoba Energy and Mines, Mineral Resources Division, Mines Branch, Open File Report OF84-2, 26p.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 34.

REFERENCES cont'd

Manitoba Mines Branch:

a Non-confidential Assessment Files; File Nos. 90353, +90360, 91564, 91700, 92020, 92473.

b Annual Report on Mines and Minerals; 15th, p. 98; 16th, p. 33; 18th, p. 80; 25th, p. 46-48.

Solonyka, E.R., 1974, Mink Narrows copper deposit, Lake Athapapuskow-Manitoba; M.Sc. Thesis, University of Manitoba, 69p.

Syme, E.C., 1988, Athapapuskow Lake project; Manitoba Energy and Mines, Minerals Division, Report of Field Activities, 1988, p. 20-34.

MAP REFERENCES

Map 63K/12, Schist Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2453G, Athapapuskow Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/12a,b, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 347G, C 40 088G, Schist Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

Map OF84-2, South of Flin Flon - Snow Lake area, (Airborne gradiometer interpretation), Scale 1:1 000 000 - Accompanying Report by Hosain (1984), Manitoba Mines Branch.

Maps OF87-11-4A/OF87-11-4B, (Geophysical compilations), Schist Lake area, Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 42-16, Athapapuskow Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Buckham (1942), Geological Survey of Canada.

#Map 807A, Athapapuskow Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Buckham (1944), Geological Survey of Canada.

MAP REFERENCES cont'd

Map A-567 A, Plan of EM survey and diamond drilling, (Claim), Scale 1:4800, in Non-confidential Assessment File No. 90360, Manitoba Mines Branch.

Map, Geology of Flin Flon - Elbow Lake area, (Geology), Scale 1:276 472 - Figure 18 in Report by Davies et al.(1962), Manitoba Mines Branch.

Preliminary Map 1988 F-2, Bakers Narrows, (Geology), Scale 1:15 840, by E.C. Syme, Manitoba Minerals Division.

Map, Schist Lake, (Exploration history review), Scale 1:50 000 - Accompanying Report by Bamburak (1977), Manitoba Mineral Resources Division.

Claim Map Series 63K/12 SE, Scale 1:31 680, circa 1977, Mining Recording, Manitoba Mines Branch.

REMARKS

This card was previously 63K/12 PYR 2, circa 1977.

The location of Sun 1 on the claim maps and on Map A-567 A differs slightly. Its location on the claim maps has been used to trace the staking history.

(NOTE: Current claim maps indicate that the Sun 1 claim area shown on Map A-567A is staked under C.R. 7 (P 22863)).

Comp./Rev.	SMH	PA
By Date	01-77	12-89

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO.** 1017

PRODUCT Pyrite **N.T.S. AREA** 63K/12 SE **REF.** PYR 2

NAME OF PROPERTY:
CB 4504

OWNER OR OPERATOR AND ADDRESS
1990 - A.L. Parres Ltd.
P.O. Box 577
Flin Flon, Manitoba
R8A 1N4

OBJECT LOCATED: Drill hole C-7 **MINING DIVISION** The Pas

Lat. 54° 37.38' Long. 101° 41.06' UNCERTAINTY: 300 m

Sec. Tp. 65 R. 28 WPM

DESCRIPTION OF DEPOSIT

A 24 m long section of drill core from DDH C-7 contained massive pyrite (90%) and graphite (5%) at a drill depth of 132 m. Other drill holes in the area encountered similar mineralization, usually at depths of 61 -93 m. DDH C-1 intersected 35 m of sheared and brecciated rhyolitic agglomerate with pyrite blebs and bands along minor fractures. Pyrite and hematite were also reported in rhyolite, rhyolitic tuff, (gabbro) and andesite, in several holes (Non-confidential Assessment File No. 91468).

HISTORY OF EXPLORATION AND DEVELOPMENT

The occurrence is located in Athapapuskow Lake, 4 km west of Mink Narrows, 6.3 km south-southwest of Bakers Narrows, and 5.85 km north-northwest of the town of Athapap. Drilling over a distance of 2.25 km southwest and 1.13 km north of this area, also encountered pyrite mineralization.

Cat 26 (18538) was staked by James O'Neill in 1948. In 1949, a ground EM survey was carried out and one hole (DDH AT-1) was diamond drilled by Sherritt Gordon Mines, Limited on an adjacent claim (Cat 23, P 18536). A drill core assay of 0.12% Cu, 6.8 g/t Ag, trace Au, Ni was reported (Non-confidential Assessment File No. 90322; Location No. 40, Bamburak, 1977). The Cat group of claims was apparently held by Stanmac Limited. In 1950, Cat 26 (P 18538) was cancelled.

Asarco 13 (P 5163C) was staked in 1966 by W.C. Murray and assigned to T.C. Osborne. The claim was cancelled the following year.

In 1971, CB 4504 was staked by Garth B. Burton and airborne survey results were submitted by Manitoba Mineral Resources Ltd. (MMR) to the Manitoba Mines Branch on behalf of Cerro Mining Company of Canada Limited (Non-confidential Assessment File No. 90350). In 1972, the claim was assigned to Cerro Mining Company of Canada Limited which then signed a 3 year option agreement with MMR.

Associated minerals or products of value
copper, zinc, gold, silver.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

MMR carried out a ground EM survey that year, and followed it up with a 7-hole, 1170 m, diamond drill program in 1973. The drilling yielded several long sections of core mineralized with pyrite and graphite (Location No. 75, Gale et al., 1980; Non-confidential Assessment File No. 91468). An assay of 0.06% Cu, 0.06% Zn, 1 g/t Au was reported from DDH C-2 (Non-confidential Assessment File No. 91468). The option was terminated that year. An airborne survey was flown that year by Hudson Bay Exploration and Development Company Limited (H.B.E.D.) under Airborne Permit No. 109 (Non-confidential Assessment File No. 91700). CB 4504 was cancelled in 1974.

In 1976, CB 4293, area 259 ha, was staked by George Lawson (assisted by Lunn Johnston) for A.L. Parres. In 1978, the holder's name changed to A.L. Parres Ltd., and then to H.B.E.D. which did an HLEM survey that year (Non-confidential Assessment File No. 92808). Two holes totalling 472 m were drilled on CB 4293 in 1980. About 1.13 km north-northeast of DDH C-7, DDH ALP-7 cut 13 m of pyrite (10-80%), graphite (up to 8%), trace chalcopyrite, hematite (up to 2%) and returned maximum assays of 0.1% Zn, 0.1% Cu, trace Ag, Au; DDH ALP-8 had 27 m of core with pyrite (up to 80%), graphite (up to 30%) and some chalcopyrite (Non-confidential Assessment File No. 92743).

Later history of the property is as follows:

Year	Activity
1980	Canadian Nickel Company Ltd. carried out an airborne EM/MAG survey (see Map 1, Fig. 7, 13, 19 in Non-confidential Assessment File No. 92473).
1981	Change of holder's name to A.L. Parres Ltd.
1987	CB 4293 cancelled
1987	Ink 3 (P 3273E) staked by B. Murray for A.L. Parres Ltd.
1989	Cancelled
1989	Kin 3 (P 8105E), area 256 ha, staked by B. Murray for A.L. Parres Ltd.

REFERENCES

Ramburak, J.D., 1977, Exploration history review of the Schist Lake area, Manitoba 63K/12; Manitoba Department of Mines, Resources & Environmental Management, Mineral Resources Division, Open File Report OF77-6, p. 14.

Buckham, A.F., 1942, Athapapuskow Lake; Geological Survey of Canada, Paper 42-16, 5p.

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REFERENCES cont'd

Hosain, I.T., 1977, Exploration history review - geophysical evaluation; Canada-Manitoba, NREP 2nd Annual Report 1976-1977; Manitoba Department of Mines, Resources & Environmental Management, Open File Report OF77-7, p. 69-70.

Hosain, I.T., 1984, Interpretation of airborne magnetic gradiometer surveys of the area south of the Flin Flon - Snow Lake Belt (parts of NTS 63K and 63J); Manitoba Energy and Mines, Mineral Resources Division, Mines Branch, Open File Report OF84-2, 26 p.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 30-31.

Manitoba Mines Branch:

a Non-confidential Assessment Files; File Nos. +90322, 90350, +91468, 91700, 92473, 92808.

b Corporation Files; Manitoba Mineral Resources Ltd. (Annual Reports 1971-1972, 1972-1973); Stanmac Limited.

MAP REFERENCES

Map 63K/12, Schist Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2453G, Athapapuskow Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/12a,b, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 347G, C 40 088G, Schist Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

Map OF84-2, South of Flin Flon - Snow Lake area, (Airborne gradiometer interpretation), Scale 1:1 000 000 - Accompanying Report by Hosain (1984), Manitoba Mines Branch.

MAP REFERENCES cont'd

Maps OF87-11-4A/OF87-11-4B, (Geophysical compilation), Schist Lake area, Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 42-16, Athapapuskow Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Buckham (1942), Geological Survey of Canada.

Map 807A, Athapapuskow Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Buckham (1944), Geological Survey of Canada.

Preliminary Map 1988 F-1, Schist Lake, (Geology), Scale 1:15 840, by E.C. Syme, Manitoba Minerals Division.

#Map, Schist Lake, (Exploration history review), Scale 1: 50 000 - Accompanying Report by Bamburak (1977), Manitoba Mineral Resources Division.

*Map, (Diamond drill holes, EM survey), Scale 1:4800, in Non-confidential Assessment File No. 91468, Manitoba Mines Branch.

Claim Map Series 63K/12SE, Scale 1:31 680, circa 1973, Mining Recording, Manitoba Mines Branch.

REMARKS

1. This is a new 63K/12 PYR 2 Mineral Inventory Card as of 1990. The former 63K/12 PYR 2 card, circa 1977, has been rewritten as 63K/12 CU 21.

2. About 1.75 km SSW, DDH ALP-12 had traces of chalcopyrite throughout the 104-166 m section of core and 1.2 km SSW, DDH ALP-11 had 60-70% pyrite, 20-30% graphite over 6 m; 2.7 km SE, DDH ALP-13 cut 4 m of core mineralized with trace to 0.5% chalcopyrite (Non-confidential Assessment File No. 92808).

3. About 2.3 km SSW, DDH C-9 cut 21 m of felsic/graphitic schist with numerous fine layers of pyrite (Non-confidential Assessment File No. 91468; Location No. 76, Gale et al., 1980).

4. About 850 m NW, DDH AL-10 cut 12 m of core with 20% pyrite and 10-25% graphite, which averaged 0.05 g/t Au, 0.5 g/t (up to 1.0 g/t) Ag, 0.01% Cu, 0.01% Zn (Non-confidential Assessment File No. 92769). Note: gold and silver assay units were not reported, and are assumed to be in g/t.

Comp./Rev. PA
By Date 01-90

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO. 678**

PRODUCT Zinc **N.T.S. AREA** 63K/12 NW **REF.** ZN 1

NAME OF PROPERTY:
Now 2, 3

OWNER OR OPERATOR AND ADDRESS
1989 - W. Bruce Dunlop Limited (N.P.L.)
201-2639 Portage Avenue
Winnipeg, Manitoba
R3J 0P7

OBJECT LOCATED: Drill hole **MINING DIVISION** The Pas

Lat. 54° 44.01' Long. 101° 47.34' **UNCERTAINTY:** 300 m

Sec. Tp. 66 R. 28 WPM

DESCRIPTION OF DEPOSIT

Massive sulphides occur in a zone that is 23 m (75 ft) long and 7.6 m (25 ft) wide apparently in association with minor folding near a contact between carbonitized Precambrian rhyolite and a diorite dyke. The massive sulphide body is on the western limb of an anticline and is east of the Cliff Lake Fault.

The highest assays were for zinc found in massive pyrrhotite and pyrite with minor chalcopyrite in greenstone and rhyolite. Sphalerite is noted infrequently in this drill log. The main constituents of the massive sulphide are pyrite and pyrrhotite. West of this zone, disseminated pyrite was traced on surface over a length of 335 m (1100 ft) and a width of up to 31 m (100 ft) (Non-confidential Assessment File No. 90380).

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located near the western shore of Manistikwan Lake. Provincial Trunk Highway 10 cuts through the property 8.8 km southeast of Flin Flon.

Alba 7 (P 2051) was staked in 1934 by J. Beaudry. It was assigned to R. Beaudry and then to Manitoba Quebec Mines Limited later that year. Some surface work may have been done on this claim prior to its cancellation in 1936.

The ground was removed from staking for several years. Some incomplete geologic mapping was done in 1950 when work was done on the adjoining staked area (Non-confidential Assessment File No. 90374). The ban on staking was partially removed. Now 2 and 3 Fractions (P 24105, 6) were recorded by R.L. Vancoughneet in 1951 and were assigned to E.T. Hartnett the following year. Trenching was done before they were cancelled in 1954.

Associated minerals or products of value

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Now 2, 3 (P 36665, 6) were staked by H. Dowhaluk in 1955. De Ville Copper Mines Limited, in conjunction with S. Taylor, optioned the property in 1956. Magnetic and electromagnetic surveys were made the following year and detailed geologic mapping was completed (Non-confidential Assessment File No. 90380). De Ville diamond drilled eight holes on these claims in 1957 for a total of 973 m (3192 ft) (Non-confidential Assessment File No. 90375; Location No. 177, Bamburak, 1977). The drilling located a massive sulphide zone containing up to 0.4% Zn over 1.5 m (5 ft), however most of the core assayed trace to 0.1% Zn with no more than a trace of Cu, Au, Ag, and Ni. Further work on the property was not recommended (Non-confidential Assessment File No. 90380). The claims were cancelled in 1959.

Later claim history is tabulated below:

Year	Activity
1970	CB 2875, area 324 ha, staked by Al T. Jacobson. The claim was grouped with Lac 1, 2, CB 2873 - CB 2875 in 1972. Certificates of work were granted in 1972 and 1973.
1973	Airborne surveys (EM, and EM/MAG) carried out by Hudson Bay Exploration and Development Company Limited (H.B.E.D.) and by Sherritt Gordon Mines Limited under Airborne Permits 109 and 114, respectively (Non-confidential Assessment File Nos. 91700, 92020).
1974	CB 2875 cancelled.
1976	Field observations by G. Gale (Location No. 96, Gale et al., 1980).
1977	CB 7758, CB 7759 staked by Eugene J. Puritch for A.L. Parres. The claims were grouped with CB 7755, CB 7760, CB 8952, P 1516E, and P 2799E, in 1979.
1984	Claims lapsed and were restaked as Alone 2 (W 47435), area 122 ha, and Alone 3 (W 47436), area 93 ha, by A.L. Parres (assisted by G. Custer) for A.L. Parres Ltd.
1986	Cancelled.
1988	Stack 4 (P 6977E), area 163 ha, and Stack 3 (P 6852E), area 135 ha, staked by Peter Dunlop for W. Bruce Dunlop Limited (N.P.L.).

REFERENCES

Bailes, A.H. and Syme, E.C., 1989, Geology of the Flin Flon - White Lake area; Manitoba Energy and Mines, Geological Services, Geological Report GR 87-1, p. 120-136, 257, 271.

Bamburak, J.D., 1977, Exploration history review of the Schist Lake area, Manitoba 63K/12; Manitoba Department of Mines, Resources & Environmental Management, Mineral Resources Division, Open File Report OF77-6, p. 24-26, 28-29, 33-35.

Gale, G., Koo, J., Solkoski, L. and Southard, G., 1976, Evaluation of massive sulphide environments; in Canada - Manitoba NREP 1st Annual Report 1975/1976; Manitoba Department of Mines, Resources and Environmental Management, Mineral Resources Division, Open File Report 77/1, p. 43.

REFERENCES cont'd

Gale, G.H., Baldwin, D.A., and Koo, J., 1980, A geological evaluation of Precambrian massive sulphide deposit potential in Manitoba; Manitoba Department of Energy and Mines, Mineral Resources Division, Economic Geology Report ER79-1, p. 104.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 25.

Manitoba Mines Branch:
a Corporation Files; De Ville Copper Mines Limited; Manitoba Quebec Mines Limited, NW12, 63K.

b Non-confidential Assessment Files; File Nos. 90374, 90375, 90380, 91700, 91596, 91597, 92020.

Tanton, T.L., 1941, Schist Lake (Marginal Notes); Geological Survey of Canada, Map 633A.

MAP REFERENCES

*Map 63K/12, Schist Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2453G, Athapapuskow Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Maps 21237G, 41237G, 63K/12e,f, Manitoba - Saskatchewan (Total Field and Vertical Gradient), Scale 1:20 000; GSC Open File 1626, Geological Survey of Canada (1987).

Maps C 21 260G, C 41 260G, Schist Lake, (Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1987).

Maps OF87-11-4A/OF87-11-4B, (Geophysical compilation), Schist Lake area, Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

MAP REFERENCES cont'd

Map 601A, Schist Lake, (Roads, mine shafts, mineral prospects, etc.), Scale 1:63 360, Geological Survey of Canada (1940).

Map 633A, Schist Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Tanton (1941), Geological Survey of Canada.

#Map, Geology of north part of (De Ville Mines) property, (Geology), Scale 1:2400, in Non-confidential Assessment File No. 90380, Manitoba Mines Branch.

Map GR87-1-1, Flin Flon - White Lake, (Geology), Scale 1:20 000 - Accompanying Report by Bailes and Syme (1989), Manitoba Energy and Mines.

Map GR87-1-2, Geology of the Flin Flon - White Lake area showing mineral occurrences, alteration, and locations of analyzed samples, Scale 1:20 000 - Accompanying Report by Bailes and Syme (1989), Manitoba Energy and Mines.

Map, Schist Lake, (Exploration history review), Scale 1:50 000 - Accompanying Report by Bamburak (1977), Manitoba Mineral Resources Division.

Claim Map Series 63K/12NW, Scale 1:31 680, circa 1959, Mining Recording, Manitoba Mines Branch.

REMARKS

1. Diamond drilling, approximately 0.8 km south of Now 2 and 3, in 1949 found maximums of: 8.2 g/t (0.24 oz/ton) Ag across 0.6 m (1.8 ft) and 0.14% Cu across 0.9 m (3 ft); 0.1% Pb across 0.3 m (1 ft) (Non-confidential Assessment File No. 91596; Location Nos. 219, 214, Bamburak, 1977). An assay of 5.8 g/t Ag, 0.3 g/t Au reported 1.5 km northeast, and a copper occurrence is indicated 1.85 km NNE of Now 2, 3 on Map 633A; an assay of 2.1 g/t Au, 0.08% Cu, 0.05% Zn reported 2.3 km northeast (Location Nos. 223, 142, Bamburak, 1977).
2. In 1955, drilling 1.6 km NW found trace Au, Ag over a 5.7 m length of core. Another hole, 1.2 km NW of Now 2, had 4.8 g/t Ag, trace Au, 0.06% Cu over 1 m (Non-confidential Assessment File No. 90375, 90380; Location Nos. 158-159, Bamburak, 1977). A copper occurrence is indicated 1.2 km WNW (Map, Non-confidential Assessment File No. 90380; Location No. 160, Bamburak, 1977).
3. A sulphide zone was noted 400 m north of Now 2, 3, near Burnt Island (Non-confidential Assessment File No. 91597). One drill hole (B.1.6) intersected 42 m of mineralization at a depth of 95 m; an assay of 0.1% Cu, 3.4 g/t Ag, 0.7 g/t Au, trace Zn was reported (Location Nos. 211-213, 216-218, 220, Bamburak, 1977). The massive sulphides (mainly Py, trace Cu, Zn) are interbedded with graphitic "tuff", and form a lens-shaped body 975 m long and up to 45 m wide, trending 139° (Bailes and Syme, 1989, p. 271).

Comp./Rev.	SMH	PA
By Date	01-77	12-89

PRODUCT Zinc **N.T.S. AREA** 63K/12 NE **REF.** ZN 2

NAME OF PROPERTY:
Tarry

OWNER OR OPERATOR AND ADDRESS
1990 - W. Bruce Dunlop Limited
(N.P.L.)
201-2639 Portage Avenue
Winnipeg, Manitoba
R3J 0P7

OBJECT LOCATED: Drill Hole **MINING DIVISION** The Pas

Lat. 54° 38.22' Long. 101° 36.80' UNCERTAINTY: 100 m

Sec. Tp. 65 R. 28 WPM

DESCRIPTION OF DEPOSIT

Massive pyrite with chalcopyrite and sphalerite on fractures was noted over a 32 m (106.2 ft) long section of core from DDH B.B. No. 7. Similar mineralization was noted in three sections of core, totalling 28 m (91.7 ft), from DDH B.B. No. 6. These holes also intersected quartz talc schist with minor pyrite (1-20%), hematite and sericite. In other drill holes, disseminated and stringer pyrite and chalcopyrite were noted in sericitic and talcy rhyolite, rhyodacite, andesite (partly tuffaceous), quartz sericitic schist, sericitic quartz carbonate rock, quartz porphyry, and chloritic schist. Other sulphides reported include minor arsenopyrite, pyrrhotite, and possibly tetrahedrite.

HISTORY OF EXPLORATION AND DEVELOPMENT

The occurrence is located near the south shore of an island in Athapapuskow Lake, 5.2 km southeast of Bakers Narrows and 1.75 km north-northeast of Mink Narrows. It is 600 m southwest of the Billy Boy gold deposit (63K/12 AU 1).

Tarry (36426) was staked in 1925. Trenches were dug each year from 1926 to 1930. In 1930, Arthur G.H. Mast did some overburden stripping and blasting in the area for Wm.E. Baker. Diamond drill work was reported in 1931, followed by more trench work from 1932 to 1935.

In 1934, protection was granted to the estate of the late Mr. Baker. The claim was transferred to William Govan in 1935. In 1936, the claim was surveyed as Tarry No. 36426, Lot 1795, Group 421, area 20.25 ha. Trenching was carried out the following year. Tarry was leased as M-1072 in 1939.

The lease was transferred to Wm.F. Hughes in 1941. It was optioned to Hudson Bay Exploration and Development Company Limited (H.B.E.D.) in 1953. H.B.E.D. conducted an HLEM survey and a 4-hole, 1103 m, diamond drill program, before abandoning its option in 1954 (Non-confidential Assessment File Nos. 90329, 92616).

Associated minerals or products of value
copper, silver, gold.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Chalcopyrite was noted in sericite schist over 3.7 m at a depth of 39 m in Hole 1; Hole 4 intersected long sections of pyrite mineralization; Hole 2 had disseminated pyrite and chalcopyrite at depths of 17-138 m and 161-166 m (Non-confidential Assessment File No. 92616). A VLEM survey was carried out by H.B.E.D. in 1956 (Non-confidential Assessment File No. 90329).

In 1960, Lease M-1072 was renewed for another 21 years. The claim was grouped with the Billy Boy and Portage claims in 1965. The lease was transferred from the late Mr. Hughes to T.C. Osborne in 1961, and then to Mr. John Murray in 1967.

In 1969, a HLEM survey was carried out by Straus Exploration Inc., followed by a 2-hole, 471 m, diamond drill program (Non-confidential Assessment File Nos. 90331, 92617). Maximum assays of 0.91% Cu, 6.9 g/t Ag, 1.4 g/t Au were reported from Hole 1; 0.3% Cu and 4.1 g/t Ag from Hole 2. A turam electromagnetic survey was carried out for Straus Exploration Inc. in 1970 (Non-confidential Assessment File No. 91849). In 1973, airborne (EM and EM/MAG) surveys were carried out by H.B.E.D. and by Sherritt Gordon Mines Limited under Airborne Permits 109 and 114, respectively (Non-confidential Assessment File Nos. 91700, 92020).

In 1975, Lease M-1072 was converted to claim 36426. Granges Exploration Aktiebolag carried out a HLEM survey and a 4-hole diamond drill program in 1976. Hole B.B. No. 2, 53.6 m deep, cut an 18.6 m section of core with near solid-solid pyrite, sericite on cleavage planes, 1% chalcopyrite, trace galena, sphalerite, at a drill depth of 35 m; maximum core assays reported were 2.55% Zn, 1.08% Cu, 2.02 g/t Ag, 0.082 g/t Au (Non-confidential parts of Assessment File No. 98560*). Hole B.B. No. 4, 153 m deep, returned maximum core assays of 0.16% Zn, 0.38% Cu, 0.52 g/t Ag, 0.022 g/t Au (Non-confidential parts of Assessment File No. 99373*).

Granges Exploration Aktiebolag drilled a further five holes, totalling 432 m, in 1977. Hole B.B. No. 6, 88 m deep, returned a maximum assay of 0.96% Zn, 0.77% Cu, 0.91 g/t Ag and 0.075 g/t Au; a 38.6 m (126.7 ft) section of core was calculated to average 0.17% Zn, 0.14% Cu, 0.45 g/t Ag, 0.028 g/t Au. Hole B.B. No. 7, 84.7 m deep, had a maximum assay of 6.62% Zn, 0.8% Cu, 1.84 g/t Ag, 0.092 g/t Au and averaged 1.62% Zn, 0.39% Cu, 1.13 g/t Ag, 0.065 g/t Au over 19.7 m (64.6 ft). Hole B.B. No. 9 returned trace Cu, Zn, Ag, Au in assays of the 58.8 - 69.5 m (193 - 228 ft) section of core. Similar results were reported for Hole B.B. No. 10 (Non-confidential Assessment File Nos. 92624*, 92756*). In 1978, an additional 3 holes, totalling 468 m, were drilled (Non-confidential Assessment File No. 92602). Maximum assays reported were:

Hole No.	Zn %	Cu %	Ag (g/t)	Au (g/t)
B.B. 11	0.24	0.20	3.5	0.30
B.B. 12	0.04	0.23	4.5	0.50
B.B. 13	0.11	0.20	9.5	0.95

*Gold and silver assay units were not reported and are assumed to be in g/t.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Canadian Nickel Company Ltd. carried out an airborne EM/MAG survey in 1980, and Paterson Grant & Watson Limited interpreted the data (see Map 1, Fig. 7, 13, 19 in Non-confidential Assessment File No. 92473).

On March 26, 1981, the holder's name changed from John Murray estate (agent, Guaranty Trust Company of Canada) to Murray Mines Ltd., to Gyan C. Singhai, and to Golden World Resources Ltd. (all on the same day). A dispute between Raritan Holdings Ltd., Greyfriars Realty Ltd., and Brandco Investments Ltd. (plaintiffs) and Golden World Resources Ltd. was resolved with all interest in the claim being assigned to Raritan Holdings Ltd. in 1984. The claim was cancelled in September, 1985. That year, Peedee (P 5624E), covering the old Tarry and Billy Boy claims, was staked by Peter Dunlop for W. Bruce Dunlop Limited (N.P.L.).

REFERENCES

Bailes, A.H., 1971, Preliminary compilation of the geology of the Snow Lake - Flin Flon - Sherridon area; Manitoba Department of Mines and Natural Resources, Mines Branch, Geological Paper 1/71, 27p.

Bamburak, J.D., 1977, Exploration history review of the Schist Lake area, Manitoba 63K/12; Manitoba Department of Mines, Resources & Environmental Management, Mineral Resources Division, Open File Report OF77-6, 55p.

Buckham, A.F., 1942, Athapapuskow Lake; Geological Survey of Canada, Paper 42-16, 5p.

Buckham, A.F., 1944, Athapapuskow Lake (Marginal Notes); Geological Survey of Canada, Map 807A.

Hosain, I.T., 1984, Interpretation of airborne magnetic gradiometer surveys of the area south of the Flin Flon - Snow Lake Belt (parts of NTS 63K and 63J); Manitoba Energy and Mines, Mineral Resources Division, Mines Branch, Open File Report OF84-2, 26 p.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 30-31.

Manitoba Mines Branch:
- a Non-confidential Assessment Files; Nos. 90329, 90331, 91700, 91849, 92020, 92473, 92602, 92616, 92617, +92624, 92756; 98560, 99373 (Non-confidential parts).
- b Mineral Inventory Cards; 63K/12 AU 1.
- c Mining Recording Files; File No. 8777 (Tarry).
- d Mining Engineering Files; Manitoba Basin Mining Co., Limited.

REFERENCES cont'd

Syme, E.C., 1988, Athapapuskow Lake project; Manitoba Energy and Mines, Minerals Division, Report of Field Activities, 1988, p. 20-34.

Wright, J.F., 1938, Geology and mineral deposits of northwest Manitoba; Geological Survey of Canada, Summary Report 1930, Part C, p. 53.

MAP REFERENCES

Map 63K/12, Schist Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2453G, Athapapuskow Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/12g,h, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 347G, C 40 088G, Schist Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

Map OF84-2, South of Flin Flon - Snow Lake area, (Airborne gradiometer interpretation), Scale 1:1 000 000 - Accompanying Report by Hosain (1984), Manitoba Mines Branch.

Map 42-16, Athapapuskow Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Buckham (1942), Geological Survey of Canada.

Map 807A, Athapapuskow Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Buckham (1944), Geological Survey of Canada.

Preliminary Map 1988 F-2, Bakers Narrows, (Geology), Scale 1:15 840, by E.C. Syme, Manitoba Minerals Division.

*Map (diamond drill hole locations, magnetic survey), Scale 1:2400, in Non-confidential Assessment File No. 92624, Manitoba Mines Branch.

#Map, Schist Lake, (Exploration history review), Scale 1:50 000 - Accompanying Report by Bamburak (1977), Manitoba Mineral Resources Division.

Claim Map Series 63K/12 NE, Scale 1:31 680, circa 1970, Mining Recording, Manitoba Mines Branch.

NAME OF PROPERTY		FILE NO. 1018
Tarry	N.T.S. AREA 63K/12 NE	REF. ZN 2

REMARKS

1. About 5 km ENE, on Payuk Lake, DDH Yuk-3 cut andesite flow and fine grained diorite mineralized with pyrite (1-6%), pyrrhotite (1-3%), chalcopyrite (up to 1%), sphalerite (1-2%) and returned a maximum assay of 0.8% Zn, 0.26% Cu (Non-confidential Assessment File No. 92392). Specks of sphalerite and chalcopyrite noted in a 16.8 m section of core mineralized with pyrite and pyrrhotite, from the north end of Payuk Lake (Location No. 36, Bamburak, 1977; Non-confidential Assessment File No. 91578).

2. About 2.45 km NNE, pyrite, chalcopyrite, considerable molybdenum, and possibly zinc reported (Non-confidential Assessment File No. 92770).

3. An assay of 0.66% Zn, 0.04% Cu, 10.5 g/tonne Ag, 0.3 g/tonne Au reported from DDH AL-9-82 core, 3.7 km WNW and trace Cu, Zn, Ag, Au over 8.2 m from DDH AL-3-78 (Non-confidential Assessment File Nos. 92823, 92824).

Comp./Rev.	PA
By Date	01-90

PRODUCT Copper **N.T.S. AREA** 63K/13 SW **REF.** CU 6

NAME OF PROPERTY:
D.K. 5

OWNER OR OPERATOR AND ADDRESS
1988 - Hudson Bay Exploration and
Development Company
Limited
P.O. Box 1500
Flin Flon, Manitoba
R8A 1N9

OBJECT LOCATED: Centre of Claim **MINING DIVISION** The Pas

Lat. 54° 45.62' Long. 101° 46.55' **UNCERTAINTY:** 500 m

Sec. Tp. 66 R. 29 WPM

DESCRIPTION OF DEPOSIT

Sulphides were found in a fine-grained acid intrusive rock in Precambrian andesite. The sporadic patches of disseminated sulphides were found by drilling beneath Manistikwan Lake. A pyrite and chalcopyrite showing was also found in a shear on an island.

Copper was reported in one hole (Non-confidential Assessment File No. 90465). Another hole nearby intersected only pyrite and graphite (Non-confidential Assessment File No. 90464).

HISTORY OF EXPLORATION AND DEVELOPMENT

The occurrence is located beneath the northern part of Manistikwan Lake between Big Island and the east shore of the lake. Flin Flon is approximately 6 km west.

Dudley 7 (P 11131) was staked by S. Schiltroth in 1946, and cancelled the following year. An EM survey was done in the area by Hudson Bay Mining and Smelting Co., Limited for Stanmac Limited in 1949 (Non-confidential Assessment File Nos. 91596, 91597).

D.K. 5 (P 24763) was staked in 1952 by W.J. Kelly. It was optioned to Fairway Flin Flon Mines Limited later that year. Early in 1953 six holes, totalling 520 m (1707 ft) were drilled on D.K. 5. The first hole cut 0.95% Cu and trace Au over 0.5 m (1.5 ft) about 27.4 m (90 ft) down the hole (Non-confidential Assessment File No. 90465). Other drill holes found sulphides but no assays were reported. The option was abandoned in 1955. Later in 1955 the claim was assigned to Manchica Mining Company Limited. The claim was cancelled in 1959.

Associated minerals or products of value

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

More recent history of the property is tabulated below:

Year	Activity
1960	Jim 53 (P 81991) staked by U. Arsenault
1961	Assigned to Prospectors Airways Company, Limited
1961	An electromagnetic survey found no conductors on this claim (Non-confidential Assessment File No. 90378).
1962	Cancelled
1963	Man 5 (P 8190A) staked by G. Rapson
1965	Cancelled
1970	CB 2855 staked by G. Grindle
1972	A Turam horizontal loop electromagnetic survey was made over the eastern part of the claim block by Tri-J Mineral Surveys Ltd. for Straus Exploration, Inc. which then drilled a 90.5 m diamond drill hole to test an electromagnetic anomaly. No economic sulphides were reported in the hole, and the conductor was explained by pyrite layers and graphitic schist (Non-confidential Assessment File Nos. 90463, 90464).
1973	Cancelled
1973	CB 5357, area 149.3 ha, staked by H. Guymer
	Assigned to Hudson Bay Exploration and Development Company Limited (H.B.E.D.). H.B.E.D. flew an airborne EM survey under Airborne Permit No. 109 (Non-confidential Assessment File No. 91700).
1974	Airborne electromagnetic and magnetic surveys (Input Mark VI) flown by Granges Exploration AB (Non-confidential Assessment File No. 92125).
1975	Turam survey registered
1982	Geological mapping by Manitoba Government (Bailes and Syme, 1982).
1983	Grouped with claims CB 5352 - CB 5355, P 4313E.
1984	Grouped with claims CB 3020, CB 5352, CB 5354 - CB 5356, P 4313E. The area was examined by the Manitoba Government (Parberry and Gale, 1984).
1985	Grouped with CB 3020, CB 5354 - CB 5356, CB 4258, CB 13410, CB 13411, P 2774E, P 2775E, P 2777E to P 2780E, P 3674E, P 3675E, P 4313E, P 4506E, P 4507E, P 4738E, P 4739E.
1988	The Manitoba Government reported two sample assays of 18 ppb and 24 ppb Au (Gale and Eccles, 1988).

REFERENCES

Bailes, A.H. and Syme, E.C., 1982, Flin Flon - Schist Lake area; Manitoba Department of Energy and Mines, Mineral Resources Division, Report of Field Activities, 1982, p. 24-29.

Davies, J.F., Bannatyne, B.B., Barry, G.S., and McCabe, H.R., 1962, Geology and mineral resources of Manitoba; Manitoba Department of Mines and Natural Resources, Mines Branch, p. 74.

REFERENCES cont'd

Gale, G.H., Baldwin, D.A., and Koo, J., 1980, A geological evaluation of Precambrian massive sulphide deposit potential in Manitoba; Manitoba Department of Energy and Mines, Mineral Resources Division, Economic Geology Report ER79-1, p. 107.

Gale, G.H. and Eccles, D.R., 1988, Mineral deposits and occurrences in the Flin Flon area NTS 63K/13: Part II, Flin Flon area (63K/13SW); Manitoba Energy and Mines, Geological Services, Mineral Deposit Series, Report No. 2, p. 40-41.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 37-47.

Manitoba Mines Branch:
- a Corporation Files; +Fairway Flin Flon Mines Limited.
- b Non-confidential Assessment Files; File Nos. 90378, 90462, 90463, 90464, +90465, 91596, 91597, 91700, 92010, 92125, 92634.

Parberry, D. and Gale, G.H., 1984, Mineral deposit investigations in the Flin Flon area; Manitoba Energy and Mines, Mineral Resources, Report of Field Activities, 1984, p. 60, 64.

Tanton, T.L., 1941, Flin Flon, Saskatchewan and Manitoba (Marginal Notes), Geological Survey of Canada, Map 632A.

MAP REFERENCES

Map 63K/13, Flin Flon, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

*Map 2454G, Flin Flon, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000; Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Maps 21242G, 41242G, 63K/13c,d, Manitoba - Saskatchewan, (Total Field and Vertical Gradient), Scale 1:20 000; GSC Open File 1626, Geological Survey of Canada (1987).

Maps C 21 262G, C 41 262G, Flin Flon, (Aeromagnetic Total Field and VLF/EM Total Field profiles; Vertical Gradient and VLF/EM quadrature profiles), Scale 1:50 000, Geological Survey of Canada (1988).

MAP REFERENCES cont'd

Maps OF87-11-5A, OF87-11-5B, Flin Flon, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 632A, Flin Flon, Saskatchewan and Manitoba, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Tanton (1941), Geological Survey of Canada.

Map ER79-1-15, Cormorant Lake, (Geology), Scale 1:250 000 - Accompanying Report by Gale et al.(1980), Manitoba Mineral Resources Division.

Preliminary Map 1983 W-1, Flin Flon - Schist Lake, (Geology), Scale 1:20 000, by A.H. Bailes and E.C. Syme, Manitoba Mineral Resources Division.

Map GR87-1-1, Flin Flon - White Lake, (Geology), Scale 1:20 000, by A.H. Bailes and E.C. Syme, Geological Services Branch, Manitoba Energy and Mines.

Map MDS Map No. 2, Flin Flon area (63K/13SW), (Geology), Scale 1:20 000 - Accompanying Report by Gale and Eccles (1988), Manitoba Energy and Mines.

#Claim Map Series 63K/13 SW, Scale 1:31 680, circa 1958, Mining Recording, Manitoba Mines Branch.

Airphoto: A26364-173.

REMARKS

1. A copper occurrence at the northeast end of Schist Lake is indicated on Map 632A approximately 1.8 km west-southwest of D.K. 5. Nothing further is known about the showing. One km southwest of D.K. 5 is another reported Cu showing (Davies et al., 1962, p. 74, Fig. 18).

2. A drill hole located approximately 1 km north-northeast intersected 0.7 g/t (0.02 oz/ton) Ag, 0.03-0.04% Cu, 0.01-0.07% Zn, and traces of Au, over 13 m (41 ft) (Non-confidential Assessment File No. 90462; see also Gale and Eccles, 1988, p. 38-39). Talc and soapstone are also indicated in the vicinity on Map 632A.

   A showing at the north end of Charlie Lake (also known as Steeves Lake) gave 1.42% Cu, 1.37 g/t (0.04 oz/ton) Au over 1.4 m (4.5 ft) (Non-confidential Assessment File No. 92010); in the north-central part of this lake, an 87 m deep drill hole intersected hematite, limonite and traces of chalcopyrite, and returned assays of up to 0.27% Cu, 0.1% Zn (Non-confidential Assessment File No. 92634).

Comp./Rev.	SMH	PA
By Date	03-77	10-88

PRODUCT Copper **N.T.S. AREA** 63K/13 SW **REF.** CU 7

NAME OF PROPERTY:
Kelly 3
(Embury Lake South)

OWNER OR OPERATOR AND ADDRESS
1988 - Hudson Bay Exploration and
Development Company
Limited
P.O. Box 1500
Flin Flon, Manitoba
R8A 1N9

OBJECT LOCATED: Cu showing **MINING DIVISION** The Pas

Lat. 54° 46.93' Long. 101° 46.60' UNCERTAINTY: 500 m

Sec. Tp. 67 R. 29 WPM

DESCRIPTION OF DEPOSIT

Chalcopyrite was found in altered Precambrian fragmental volcanics in a structurally complex area near Flin Flon. The volcanic rocks are overlain by sandstone and conglomerate.

A series of tight folds occur west of a major anticlinal axis. The fold series is overturned to the east. Locally, a north-plunging syncline is cut by a northwest-trending fault. The deposit is on the east limb of the syncline, which plunges north at 35-45° (Embury Lake, Corporation File and Non-confidential Assessment File No. 90471)

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit was found at the southern end of Embury Lake approximately 5.6 km east-northeast of Flin Flon.

Kelly 3 (P 3111) was staked by W.J. Kelly in 1936. Surface work was reported each year between 1937 and 1943, inclusive. It was assigned to W.J. Howison in 1946. W.J. Kelly was a shareholder in and Howison was president of Aurlode Gold Mines Limited which was formed to develop the copper-gold prospect (Aurlode Gold, Corporation File).

Surveying, geological mapping, and diamond drilling began in 1948, though no drilling was done on Kelly 3. In 1948, Kelly 3 was assigned to Aurlode Gold Mines Limited which became Embury Lake Mining Company Limited in July of that year. N.H.C. Fraser, Geologist, visited the property and commenced work in August, 1948.

Associated minerals or products of value
gold.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Drilling commenced on the claim in 1949. A magnetic survey may have also been made that year (Northern Miner, December 30, 1948). The following year copper assays were reported. Results for inclined drill hole 14 were reported as follows:

Hole Depth	Width	Cu%	Au g/t (oz/ton)
69.3-70.8 m	1.45 m (57")	0.70	0.69 (0.02)
70.8-71.96 m	1.12 m (44")	0.76	Tr
84.94-85.80 m	0.86 m (34")	3.61	0.34 (0.01)
89.0-89.81 m	0.81 m (32")	1.84	0.69 (0.02)

Another hole, ddh 11, had a 0.2 m (6") section which assayed 6.90% Cu and 2.06 g/t Au (Embury Lake, Corporation File). Some later drilling attempted to trace a synclinal structure which was believed to be associated with the mineralization. No other assays are known. Drilling ceased in 1951 with 11 drill holes totalling 3510 m (11 516 ft) having probed Kelly 3.

Later history of the property is tabulated below.

Year	Activity
1951	Lease M-3171 issued
1960	Assigned to G.D. Fairly, former president of Embury Lake
1971	Cancelled
1971	Bob 2 (P 3450E) staked by W.E. Roscoe
1971	Assigned to Cominco Limited
1973	Cancelled
1973	Bib 3 (P 3674E) staked by A.J. O'Donnell
	An airborne EM survey was done by Hudson Bay Exploration and Development Company Limited (H.B.E.D.) under Airborne Permit 109 (Non-confidential Assessment File No. 91700).
1975	Magnetic and electromagnetic surveys registered
1981	Transferred to A.L. Parres Ltd.. Detailed mapping (1:5000) by R. Schmidtke and G. Gale (Manitoba Government).
1982	Transferred to H.B.E.D.
1982-83	Geological mapping by A.H. Bailes and E.C. Syme (Manitoba Government).

REFERENCES

Bailes, A.H. and Syme, E.C., 1982, Flin Flon - Schist Lake area; Manitoba Department of Energy and Mines, Mineral Resources Division, Report of Field Activities, 1982, p. 24-29.

Gale, G.H., 1981, Mineral deposit studies in the Flin Flon area; Manitoba Department of Energy and Mines, Mineral Resources Division, Report of Field Activities, 1981, p. 45-46, 48, 54.

REFERENCES cont'd

Gale, G.H. and Eccles, D.R., 1988, Mineral deposits and occurrences in the Flin Flon area NTS 63K/13: Part II, Flin Flon area (63K/13SW); Manitoba Energy and Mines, Geological Services, Mineral Deposit Series, Report No. 2, p. 35-37.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 37-47.

Manitoba Mines Branch:
a Corporation Files; +Embury Lake Mining Company Limited (63K/13SW); Aurlode Gold Mines Limited (63K/13SW).

b Non-confidential Assessment Files; File Nos. 90378, +90471, 91700, 92010.

Tanton, T.L., 1941, Flin Flon, Saskatchewan and Manitoba (Marginal Notes), Geological Survey of Canada, Map 632A.

MAP REFERENCES

Map 63K/13, Flin Flon, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2454G, Flin Flon, (Aeromagnetic), Scale 1 63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000; Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Maps 21242G, 41242G, 63K/13c,d, Manitoba - Saskatchewan, (Total Field and Vertical Gradient), Scale 1:20 000; GSC Open File 1626, Geological Survey of Canada (1987).

Maps C 21 262G, C 41 262G, Flin Flon, (Aeromagnetic Total Field and VLF/EM Total Field profiles; Vertical Gradient and VLF/EM quadrature profiles), Scale 1:50 000, Geological Survey of Canada (1988).

Maps OF87-11-5A, OF87-11-5B, Flin Flon, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

#Map 632A, Flin Flon, Saskatchewan and Manitoba, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Tanton (1941), Geological Survey of Canada.

MAP REFERENCES cont'd

Preliminary Map 1983 W-1, Flin Flon - Schist Lake, (Geology), Scale 1:20 000, by A.H. Bailes and E.C. Syme, Manitoba Mineral Resources Division.

Map GR87-1-1, Flin Flon - White Lake, (Geology), Scale 1:20 000, by A.H. Bailes and E.C. Syme, Geological Services Branch, Manitoba Energy and Mines.

Map MDS Map No. 2, Flin Flon area (63K/13SW), (Geology), Scale 1:20 000 - Accompanying Report by Gale and Eccles (1988), Manitoba Energy and Mines.

Claim Map Series 63K/13 SW, Scale 1:31 680, circa 1970, Mining Recording, Manitoba Mines Branch.

Airphoto: A19663-22.

REMARKS

1. Cu (0.11%) and Au (0.69 g/t) were reported from ddh B1-1 located 600 m SW (see Non-confidential Assessment File Nos. 90471, 90378, 92010; Gale and Eccles, 1988, p. 37); 600 m further south on Big Island is another reported copper showing (Non-confidential Assessment File No. 90378; Gale and Eccles, 1988, p. 66-67).

Comp./Rev.	SMH	PA
By Date	03-77	11-88

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO.** 698

PRODUCT Copper **N.T.S. AREA** 63K/13 SW **REF.** CU 8

NAME OF PROPERTY:
Embury Lake West

OWNER OR OPERATOR AND ADDRESS
1988 - Hudson Bay Exploration and
Development Company
Limited
P.O. Box 1500
Flin Flon, Manitoba
R8A 1N9

OBJECT LOCATED: Cu, Zn showing (Occurrence A) **MINING DIVISION** The Pas

Lat. 54° 47.77' Long. 101° 48.25' UNCERTAINTY: 300 m

Sec. Tp. 67 R. 29 WPM

DESCRIPTION OF DEPOSIT

Occurrence	Rock Type	Mineralization	Source
A	Greenstone	Copper, zinc	Map 632A
B	Contact between greenstone and metasedimentary rocks	Copper, zinc	Map 632A
C	Graphitic schist	Chalcopyrite, zinc, pyrite, pyrrhotite	DDH No. 2 (Non-confidential Assessment File No. 90469).

All host rocks are Precambrian.

HISTORY OF EXPLORATION AND DEVELOPMENT

Three copper-zinc occurrences are located approximately 0.8 to 1.2 km west of southern Embury Lake. Flin Flon is 5 km southwest.

From north to south the occurrences are labelled A, B, and C below. A and B are shown on map 632A.

Occurrence A:
Currently staked as CB 4752
Previous work (see Remarks):
1960 - One drill hole on Mel 1 (19688) by Savoy Copper Mines Limited failed to find sulphides (Non-confidential Assessment File No. 90469). Savoy may have run an electromagnetic survey over the property (Savoy, Corporation File).

Associated minerals or products of value
zinc.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

1965 - Ann 18 (P 8510B) was staked over the property by D.A. Ramsay.
1967 - Cancelled.
1973 - Albert Stoltz staked CB 4752 for Hudson Bay Exploration and Development Company Limited (H.B.E.D.). An airborne EM survey was done by H.B.E.D. (Non-confidential Assessment File No. 91700).
1974 - H.B.E.D. made a Turam survey. Results of this work are confidential.
1981 - The Manitoba Government examined the area, and noted minor pyrite and chalcopyrite mineralization scattered over an area 400 m to the northwest (Gale, 1981, p. 46, 53-54).
1982-1983: Geological mapping by Bailes and Syme (1982, 1983).

Occurrence B:
Currently staked as Outlet 2 (37248) and Big 3 Fr (P 3625E)
Previous work:
1926 - Outlet 2 was recorded.
1973 - Hudson Bay Mining and Smelting Co., Limited (HBMS) took out 21-year Lease M-5.
1974 - H.B.E.D. made a Turam survey. Results are confidential.
1975 - Lease M-5 converted back to claim 37248 in 1975, and ownership transferred to H.B.E.D.

Occurrence C:
Currently staked as Big 3 Fr. (P 3625E)
Previous work:
1957 - A shallow hole was drilled just south of Lucky Strike 1 by W.H. Noble (Non-confidential Assessment File No. 91610).
1960 - Three holes were diamond drilled by Savoy Copper Mines Limited on Lucky Strike 1 (P 3447). Hole #2, with a bearing of 249°, an inclination of 45°, and a depth of 74 m (244 ft), intersected sulphide mineralization over a length of 19.7 m (64.6 ft). (Non-confidential Assessment File No. 90469). An electromagnetic survey may have also been done (Savoy, Corporation File).
1965 Ann 1 (P 8493B) staked by D.A. Ramsay.
1967 Cancelled.
1966 Stripe 2 (P 4258C) staked by Gordon W. Kelly.
1970 - George Grindle staked Gag 14 (P 2787E).
1971 Stripe 2 cancelled.
1972 - Diamond drilling may have been done on Gag 14 (P 2787E).
1973 - Gag 14 was cancelled.
1974 - H.B.E.D. restaked the area as Big 3 Fr. (P 3625E) and did a Turam survey. Results are confidential.
1981 - The area was examined by G. Gale (Manitoba Government): three trenches (2 x 0.5 x 0.3 m, 1 x 0.5 x 0.25 m, 13 x 1 x 2 m) were noted, as well as a pyrite-bearing (10-20%) quartz-sericite-chlorite schist zone (see also, Gale and Eccles, 1988, p. 44-45).

REFERENCES

Bailes, A.H. and Syme, E.C., 1982, Flin Flon - Schist Lake area; Manitoba Department of Energy and Mines, Mineral Resources Division, Report of Field Activities, 1982, p. 24-29.

Bailes, A.H. and Syme, E.C., 1983, Flin Flon - Schist Lake area; Manitoba Department of Energy and Mines, Mineral Resources Division, Report of Field Activities, 1983, p. 23-25.

Baldwin, D.A., 1980, Porphyritic intrusions and related mineralization in the Flin Flon volcanic belt; Manitoba Department of Energy and Mines, Mineral Resources Division, Economic Geology Report ER79-4, p. 2, 4, 18.

Gale, G.H., 1981, Mineral deposit studies in the Flin Flon area; Manitoba Department of Energy and Mines, Mineral Resources Division, Report of Field Activities, 1981, p. 45-46, 53-54.

Gale, G.H., Baldwin, D.A., and Koo, J., 1980, A geological evaluation of Precambrian massive sulphide deposit potential in Manitoba; Manitoba Department of Energy and Mines, Mineral Resources Division, Economic Geology Report ER79-1, p. 108.

Gale, G.H. and Eccles, D.R., 1988, Mineral deposits and occurrences in the Flin Flon area NTS 63K/13: Part II, Flin Flon area (63K/13SW); Manitoba Energy and Mines, Geological Services, Mineral Deposit Series, Report No. 2, p. 44-47, 51, 54, 76-77.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 37-47.

Manitoba Mines Branch:
a Corporation Files; Savoy Copper Mines Limited.

b Non-confidential Assessment Files; File Nos. +90469, 91610, 91700.

Parberry, D, and Gale, G.H., 1984, Mineral deposit investigations in the Flin Flon area; Manitoba Department of Energy and Mines, Mineral Resources Division, Report of Field Activities, 1984, p. 64.

Tanton, T.L., 1941, Flin Flon, Saskatchewan and Manitoba (Marginal Notes), Geological Survey of Canada, Map 632A.

MAP REFERENCES

Map 63K/13, Flin Flon, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

MAP REFERENCES cont'd

Map 2454G, Flin Flon, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000; Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Maps C 20 348G, C 40 089G, Flin Flon, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000; Province of Manitoba and Geological Survey of Canada (1983).

Maps 21242G, 41242G, 63K/13c,d, Manitoba - Saskatchewan, (Total Field and Vertical Gradient), Scale 1:20 000; GSC Open File 1626, Geological Survey of Canada (1987).

Maps C 21 262G, C 41 262G, Flin Flon, (Aeromagnetic Total Field and VLF/EM Total Field profiles; Vertical Gradient and VLF/EM quadrature profiles), Scale 1:50 000, Geological Survey of Canada (1988).

Maps OF87-11-5A, OF87-11-5B, Flin Flon, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

#Map 632A, Flin Flon, Saskatchewan and Manitoba, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Tanton (1941), Geological Survey of Canada.

Preliminary Map 1983 W-1, Flin Flon - Schist Lake, (Geology), Scale 1:20 000, by A.H. Bailes and E.C. Syme, Manitoba Mineral Resources Division.

Map GR87-1-1, Flin Flon - White Lake, (Geology), Scale 1:20 000, by A.H. Bailes and E.C. Syme, Geological Services Branch, Manitoba Energy and Mines.

Map MDS Map No. 2, Flin Flon area (63K/13SW), (Geology), Scale 1:20 000 - Accompanying Report by Gale and Eccles (1988), Manitoba Energy and Mines.

Claim Map Series 63K/13 SW, Scale 1:31 680, circa 1977, Mining Recording, Manitoba Mines Branch.

Airphoto: A26397-223.

REMARKS

1. Previous work given here is work reported in Assessment File. Surface work is not included.
2. A copper occurrence with no associated zinc is shown on Map 632A one km southwest of Occurrence A; it occurs within the Cliff Lake stock, which has been reported to contain minor Cu and Mo (see also Locality CL5 in Gale, 1981, p. 54; Baldwin, 1980; Gale and Eccles, 1988, p. 51).

REMARKS cont'd

3. A gold occurrence (1400 ppb Au) is shown 800 m NW of Occurrence A (Tanton, 1941; Gale and Eccles, 1988, p. 49).
4. Minor chalcopyrite, pyrite and pyrrhotite were intersected in ddh 1, on the Pal 5 claim located about 450-550 m south of Occurrence C (Non-confidential Assessment File No. 90469; Gale and Eccles, 1988, p. 76-77).
5. Disseminated chalcopyrite (10-40%), minor zinc, was reported on the east side of Grant Lake (2.36 km SW of Occurrence A) (see: 63K/13 PYR 2; Parberry and Gale, 1984, p. 64; Location No. 76, Gale and Eccles, 1988).

Comp./Rev.	SMH	PA
By Date	03-77	11-88

PRODUCT Copper **N.T.S. AREA** 63K/13 SE **REF.** CU 9

NAME OF PROPERTY:
Amulet

OWNER OR OPERATOR AND ADDRESS
1988 -

CB 8546: A.L. Parres Ltd.
Box 577
Flin Flon, Manitoba
R8A 1N4

Mur 1: Ray-Dor Resources Ltd.
Box 98
Flin Flon, Manitoba
R8A 1M6

Mik 4: Granges Exploration Limited
Suite 2300 - 885 W. Georgia St
Vancouver, British Columbia
V6C 2T6

OBJECT LOCATED: Showing **MINING DIVISION** The Pas

Lat. 54° 47.01' Long. 101° 36.19' UNCERTAINTY: 200 m

Sec. Tp. 67 R. 28 WPM

DESCRIPTION OF DEPOSIT

The area is underlain by andesitic, dacitic and rhyolitic rocks. It contains a quartz-eye carbonate-sericite schist (about 1 m in thickness and more than 100 m in exposed length) that is underlain by malachite- and chalcopyrite-bearing chloritic schists.

Stringers of chalcopyrite with pyrite occur in banded dacite tuffs, in sericite schist derived from Precambrian dacitic volcanics, and in chloritic schists. The mineralized zone strikes north and dips east. It is probably associated with a major fault zone. Copper and zinc mineralization was reported in drill core from several holes. According to Gale and Eccles (1988, p. 20), "In general higher zinc values were intersected at the north end of the lake. Holes beneath the lake and south of the lake contained considerably more copper than zinc".

HISTORY OF EXPLORATION AND DEVELOPMENT

The showing is found on the west shore of Amulet Lake, 0.8 km north of Sourdough Bay of Athapapuskow Lake. Flin Flon is approximately 15 km west-southwest. The property contains a 2 m deep shaft and a 5 - 6 m long adit.

Associated minerals or products of value
zinc.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Early history of the property is tabulated below:

Year	Activity
1920	Bell (30401) staked by G. Rosen
1924	Optioned to Manitoba Metals Mining Company, Limited
1925	Option abandoned
1929	Surface work reported
1935	Cancelled
1936	Red Metal (P 2716) staked by W. Govan
1939	Cancelled
1939	Amulet M.C. (P 4936) and Amulet 3 (P 4945) staked by J. Murray and T. Webb, respectively
1939	Murray mentioned assays of 4.5 to 8.5% Cu, probably from this property (Manitoba Mines Branch, Mining Recording File No. 8458).
1940-4	Surface work reported

By 1944 both claims were held jointly by J. Murray, T. Webb, and A. Bennett. The property was optioned to Hudson Bay Exploration and Development Company Limited (H.B.E.D.) three times. The first option lasted from July 4, 1945 to January 21, 1946. H.B.E.D. drilled four holes totalling 426 m (1399 ft) (Manitoba Mines Branch, Mining Recording File No. 8458). Other options were taken out in 1947 and 1951. A magnetic survey was made over part of the property and 17 holes were diamond drilled during the 1945 or 1947 options (Non-confidential Assessment File No. 91541). Electromagnetic surveys were done in the area by Hudson Bay Mining and Smelting Co., Limited in 1953 (Non-confidential Assessment File No. 91379).

A total of 61 holes had been drilled in the area by the end of 1953. Copper mineralization was intersected in at least ten drill holes. One hole (DDH 6) drilled beneath Amulet Lake intersected 50 cm of 8.0% Zn, 2.22 m of 3.3% Zn, and 2.6 m of 0.9% Zn and 2.18% Cu (Gale and Eccles, 1988). At the north end of the lake, a drill hole (DDH 22) intersected 36 cm of 8.4% Zn and 3.2% Cu; another drill hole (DDH 15) intersected 80 cm of 4.5% Zn, 2.37% Cu. At the south end of the lake, a drill core intersection grading 3.15% Cu and 0.1% Zn over 45 cm was reported in DDH 44 (Gale and Eccles, 1988).

The Amulet claims were cancelled in 1966.

The property has been covered by several partial restakings:

Year	Activity
1966	Ran 1,3 (P 3249C, 51C) staked by J. Murray
1967	Assigned to Guggenheim Exploration Company, Inc.
1968	One hole 283 m (929 ft) deep was drilled on Ran 1. The hole intersected "minor copper-bearing chloritic schist and altered dacites" (Gale and Eccles, 1988). Visual estimates of 0.10% Cu to 1% Cu were made (Non-confidential Assessment File No. 90451).

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

1971	Ran 1 cancelled
1971	Doug 2 (P 3382E) staked by D. Bloom over former Ran 1
1972	Geological and electromagnetic surveys made on Ran 3 and Doug 2
1973	Doug 2 assigned to Guggenheim Exploration Company, Inc. Airborne electromagnetic survey flown by H.B.E.D. under Airborne Permit No. 109.
1973-74	Airborne magnetic and electromagnetic surveys flown by Sherritt Gordon Mines Limited under Airborne Permit No. 114 (Non-confidential Assessment File No. 92020)
1975	Holder's name changed to Pinebay Mines Limited
1978	Ran 3, Doug 2 cancelled.

The area was partially restaked under BM 1 (W 45536) by Bruce D. Murray (assisted by Brian Murray) for Richard C. Murray in 1978. The BM 1 claim was cancelled in 1982. The area was restaked as Mur 1 (W 47284), area 16 ha, by B. Murray (assisted by B. Murray and R. Murray) for Ray-Dor Resources Ltd.

Other portions of the former Ran 3 and Doug 2 claims were also restaked under CB 8546 and CB 12246 (Smith No. 5), respectively. CB 8546, area 26 ha, was staked by F. Guymer (assisted by D. Evans) for A.L. Parres Ltd. in 1978. CB 12246 (Smith No. 5), area 150 ha, was staked by Ron Smith for S.M.D. Mining Co. Ltd. (wholly-owned subsidiary of Saskatchewan Mining Development Corporation) in 1980; it was restaked as Mik 4 (W 48754), area 140 ha, by W. Bruce Dunlop Limited (N.P.L.) in 1984. Mik 4 was optioned to B.P. Resources Canada Limited in 1985, and then transferred to Granges Exploration Limited in 1987.

The deposit is estimated to contain reserves of 25 000 tonnes grading 1.5% Cu, and 2.5% Zn (Map MDS 87-1).

REFERENCES

Bailes, A.H., 1971, Preliminary compilation of the geology of the Snow Lake - Flin Flon - Sherridon area; Manitoba Department of Mines and Natural Resources, Mines Branch, Geological Paper 1/71, 27p.

+Bateman, J.D. and Harrison, J.M., 1944, Mikanagan Lake, Manitoba; Geological Survey of Canada, Paper 44-22, 6p.

+Bateman, J.D. and Harrison, J.M., 1944, Geology of the Mikanagan Lake map area; The Precambrian, v. 17, No. 10, p. 6-7, 12.

Bateman, J.D. and Harrison, J.M., 1945, Mikanagan Lake (Marginal Notes); Geological Survey of Canada, Map 832A.

Davies, J.F., Bannatyne, B.B., Barry, G.S., and McCabe, H.R., 1962, Geology and mineral resources of Manitoba; Manitoba Department of Mines and Natural Resources, Mines Branch, p. 75.

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+Gale, G.H. and Eccles, D.R., 1988, Mineral deposits and occurrences in the Flin Flon area NTS 63K/13: Part I, Mikanagan area (63K/13SE); Manitoba Energy and Mines, Geological Services, Mineral Deposit Series, Report No. 1, p. 20-22.

Hayden-Luck, D. and Gale, G.H., 1985, Geological investigations in the Baker Patton-Centennial Mine area; Manitoba Energy and Mines, Geological Services, Mines Branch, Report of Field Activities, 1985, p. 74-75.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 37-47.

Manitoba Mines Branch:
a Mining Recording Files; File Nos. 8458 (Amulet), 25540 (Amulet 3).

b Non-confidential Assessment Files; File Nos. 90403, 90404, +90451, 91379, 91482, 91489, 91540, +91541, 91700, 92020.

MAP REFERENCES

Map 63K/13 SE, Flin Flon, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2454G, Flin Flon, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 63K/13a, b, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 348G, C 40 089G, Flin Flon, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000; Province of Manitoba and Geological Survey of Canada (1983).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000; Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

MAP REFERENCES cont'd

Maps 0F87-11-5A, 0F87-11-5B, Flin Flon, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

#Map 44-22A, Mikanagan Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Bateman and Harrison (1944), Geological Survey of Canada.

Map 832A, Mikanagan Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Bateman and Harrison (1945), Geological Survey of Canada.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Map ER79-1-15, Cormorant Lake, (Geology), Scale 1:250 000 - Accompanying Report by Gale et al.(1980), Manitoba Mineral Resources Division.

Map MDS 87-1, Mikanagan Lake, (Geology), Scale 1:20 000 - Accompanying Report by Gale and Eccles (1988), Manitoba Energy and Mines.

Claim Map Series 63K/13 SE, Scale 1:31 680, circa 1966, Mining Recording, Manitoba Mines Branch.

*Claim Map Series 63K/13 SE, Scale 1:31 680, circa August 29, 1988, Mining Recording, Manitoba Mines Branch.

Airphoto: A19638-102.

REMARKS

1. Chalcopyrite was also reported in drill logs from Amulet 6 and A.M. 9 (Non-confidential Assessment File Nos. 90404, 91540). A 1.1 m (3.7 ft) section of core from Mik 8, 1.5 km west of Amulet, assayed 0.13% Cu with 4.79 g/t (0.14 oz/ton) Ag (Non-confidential Assessment File No. 91489; see also Gale and Eccles, 1988, p. 37). Gold (0.8 g/t), pyrite and graphite were reported 2.4 km to the NW (Location # 86 in Gale and Eccles, 1988, p. 93; Non-confidential Assessment File No. 90402).

Comp./Rev.	SMH	PA
By Date	05-77	09-88

PRODUCT Copper **N.T.S. AREA** 63K/13 SE **REF.** CU 10

NAME OF PROPERTY:
J.S. 7

OWNER OR OPERATOR AND ADDRESS
1988 - A.L. Parres Ltd.
Box 577
Flin Flon, Manitoba
R8A 1N4

OBJECT LOCATED: Centre of Claim **MINING DIVISION** The Pas

Lat. 54° 47.22' Long. 101° 34.20' UNCERTAINTY: 500 m

Sec. Tp. 67 R. 27 WPM

DESCRIPTION OF DEPOSIT

The area is underlain by dacitic to rhyolitic volcanic rocks that have been intruded by quartz-feldspar porphyry, granodiorite and gabbroic rocks.

Sulphide mineralization occurs in zones of intensely sheared and drag folded Precambrian volcanics. The sulphide zones thicken along noses of small drag folds. Blebs and stringers up to 2.5 cm (1 inch) thick were found by diamond drilling (Non-confidential Parts of Assessment File No. 98689).

The highest copper values occurred in quartz-carbonate veins containing chalcopyrite in dacite host rock. The highest zinc assay was found in grey, siliceous tuff. Sphalerite formed small blebs with pyrite which varied from sparse disseminated to nearly massive veins. Native copper was reported in pyrite stringers and as rare blebs in tuff and rhyolite. Chalcopyrite, sphalerite, and pyrite were also noted in rhyolite and tuff (Non-confidential Assessment File No. 90427).

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located 400 m northeast of Flintoba Lake near Leo Lake, Thompson Lake and Sourdough Bay of Athapapuskow Lake. Flin Flon is approximately 19 km west.

Cap (29512) was staked by E. Brydges in 1920. Surface work was reported sporadically between 1920 and 1927. Part interest in the claim was assigned to W. Baker and E. Patton in 1927. The following year it was optioned to Flintoba Mines Limited. Surface work by Flintoba near Thompson Lake found several percent copper over 0.9 to 1.2 m (3 to 4 ft). Channel assays yielded 7.9% Cu across 0.9 m (3 ft) on a zone 396 m (1300 ft) east of the discovery zone (Manitoba Mines Branch, Corporation File). This mineralization probably occurred on Cap, Woodrow, and Rainbow M.C.'s. In 1928 Flintoba drilled the main mineralized zone on Cap and the adjacent Woodrow and Rainbow claims. At least one hole was drilled to 152 m (500 ft) (Manitoba Mines Branch, Mining Engineering File, Flintoba Mines Limited).

Associated minerals or products of value
zinc.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Surface work was reported on Cap each year from 1927 to 1935, inclusive. Part interest was assigned to W. Govan in 1931. Cap was cancelled in 1937. Some of the later history of the property is tabulated below:

Year	Activity
1938	Cap (P 4198) staked by O. Hilton
1938	Assigned to W. Govan
1939-42	Surface work reported
1944	Cancelled
1944	Wally 16 (P 7679) staked by G.N. Moore
1944	Assigned to the Consolidated Mining and Smelting Company Limited
1945	Assigned to F.G. Whitaker
1946	Cancelled
1947	J.S. 7 (P 16805) staked by J.J. Johnson
1948	Assigned to H.C. Stevens
1948-50	Surface work reported
1950	Optioned to Hudson Bay Exploration and Development Company Limited (H.B.E.D.).
1951	A geological survey was made and 7 holes were diamond drilled. Sulphides were found on surface, but drill results are unknown (Non-confidential Assessment File No. 90453).
1952	An adjacent claim (J.S. 6) to the west was drilled with five holes totalling 1430 m by H.B.E.D. (Non-confidential Assessment File No. 90435; see Remark #2). The holes intersected rare chalcopyrite blebs and stringers, rare sections of near solid pyrite, and a few sections of rhyolitic breccia and quartz veins.
1953	Option abandoned

In 1955 God's Lake Gold Mines Limited diamond drilled 17 holes, totalling 1748 m (5736 ft), near the surface showing on J.S. 7 (Non-confidential Assessment File No. 90427). Maximum reported assays were 4.50% Cu over 2.4 m (8 ft) in hole A-1 and 2.85% Zn over 1.5 m (5 ft) in hole A-15. The copper value was found 62 m (204 ft) down the hole. The zinc assay was only 10.7 m (35 ft) from surface. Hole A-1 cut three mineralized zones that are from 2.4 to 3.6 m (8 to 12 ft) wide. Copper values were less than 0.5% between these zones. Copper assays in hole A-15 were low. Other holes contained copper-zinc mineralization. Analytical data obtained from A.L. Parres is summarized as follows:

Hole	Cu% (width)	Zn% (width)
A-1	0.11% (35 m); 0.56% (6 m)	7.85% (1.5 m); 0.09% (15 m)
A-4	———	5.76% (3 m); 1.56% (7.8 m); 1.15% (3 m)
A-10	0.30% (1.5 m)	4.28% (1.5 m); 2.75% (1.5 m)
A-12	2.02% (1.5 m), 0.63% (5 m); 0.17% (6 m)	2.30% (5.5 m)
A-16	0.45% (7.8 m)	1.13% (4.9 m)

(Source: Gale and Eccles, 1988, p. 34).

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Year	Activity
1956	Assigned to B.N. Apple
1958	Trenching reported
1962	Cancelled
1962	Mark 2 (P 1878A) staked by B.P. Poulin
1963-5	Surface work reported
1966	Cancelled
1967	Flin 2 (P 3634C) staked by J. Murray
1967	Assigned to Guggenheim Exploration, Inc.

Guggenheim made a horizontal loop electromagnetic survey in April, 1967. A conductor discovered by the survey on Flin 2 was diamond drilled that autumn. At 189.5 m (622 ft) the core assayed 2.88% Cu over 0.7 m (2.2 ft) with 0.26% Zn. Other assays yielded 0.13% to 1.47% Cu (Non-confidential Parts of Assessment File No. 98681). In 1972, a magnetometer survey was carried out on an adjacent claim (Flin 1) (Non-confidential Assessment File No. 90422). Airborne surveys were flown in the area in 1973-74 by H.B.E.D. and by Sherritt Gordon Mines Limited under Airborne Permit Nos. 109 and 114, respectively (Non-confidential Assessment File Nos. 91700, 92020). Flin 2 was cancelled in 1974.

The property was covered concurrently by Mud 3 Fr and CB 4256, as described below:

Year	Activity
1974	Mud 3 Fr (P 4737E) and CB 4256 staked by A.J. O'Donnell
1976	Holder's name changed to A.L. Parres and then to Pinebay Mines Limited.

The claims were cancelled in 1978, and the area (including the former J.S. 6 area) was restaked as CB 8553, area 94 ha, by George Lawson for A.L. Parres Ltd. In 1980-1981, the Manitoba Government did a rock geochemical survey in the area to examine the nature and extent of the alteration associated with base metal mineralization. In 1981, the holder's name changed to S.M.D. Mining Co. Ltd.

The property was transferred back to A.L. Parres Ltd. in 1985. A surface lease (QL 575) for sand and gravel was issued to Granges Exploration Limited that year. Detailed geological mapping (Scale 1:5000) of the area was carried out by the Manitoba Government in 1987; further examinations were done in 1988 (see Ferreira, 1987, 1988).

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+Gale, G.H. and Eccles, D.R., 1988, Mineral deposits and occurrences in the Flin Flon area NTS 63K/13: Part I, Mikanagan area (63K/13SE); Manitoba Energy and Mines, Geological Services, Mineral Deposit Series, Report No. 1, p. 31-34.

Hayden-Luck, D. and Gale, G.H., 1985, Geological investigations in the Baker Patton-Centennial Mine area; Manitoba Energy and Mines, Geological Services, Mines Branch, Report of Field Activities, 1985, p. 74-75.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 37-47.

Manitoba Mines Branch:
a Mining Recording Files; File No. 2697 (Cap).

b Non-confidential Assessment Files; File Nos. 90422, +90427, 90435, 90453, 91481, 91700, 90202, 98670, 98681, 98689.

c Mining Engineering Files; Flintoba Mines Limited.

d Corporation Files; Flintoba Mines Limited.

MAP REFERENCES

*Map 63K/13 SE, Flin Flon, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2454G, Flin Flon, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 63K/13a, b, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 348G, C 40 089G, Flin Flon, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000; Province of Manitoba and Geological Survey of Canada (1983).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000; Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Maps OF87-11-5A, OF87-11-5B, Flin Flon, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 44-22A, Mikanagan Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Bateman and Harrison (1944), Geological Survey of Canada.

Map 832A, Mikanagan Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Bateman and Harrison (1945), Geological Survey of Canada.

Map ER79-1-15, Cormorant Lake, (Geology), Scale 1:250 000 - Accompanying Report by Gale et al.(1980), Manitoba Mineral Resources Division.

Map MDS 87-1, Mikanagan Lake, (Geology), Scale 1:20 000 - Accompanying Report by Gale and Eccles (1988), Manitoba Energy and Mines.

Preliminary Map 1987 M1-1, Leo Lake, (Geology), Scale 1:5000, by K. Ferreira, Manitoba Energy and Mines.

#Claim Map Series 63K/13 SE, Scale 1:31 680, circa 1962, Mining Recording, Manitoba Mines Branch.

Airphoto: A26328-16.

REMARKS

1. Corporation and Mining Engineering Files (Manitoba Mines Branch) for Flintoba Mines Limited indicate that early work by Flintoba was done on Cap, but most later work was done on Don Jon.

REMARKS cont'd

2. A 'Cu' symbol on Map 832A and 44-22A is probably on J.S. 6 (adjacent to J.S. 7, just north of Flintoba Lake) which contains rusty weathered outcrops of altered felsic volcanic rocks with sericite, chlorite and up to 10% pyrite, comprising a "west zone" of mineralization. Sulphide veins up to 10 cm thick were noted in trenches. The area is considered to have potential for gold mineralization (see Gale and Eccles, 1988).

3. A gold occurrence was noted near the northwest end of Leo Lake by Bateman (1945). Values of 249 and 199 ppb Au were reported by Gale and Eccles (1988, p. 31).

4. Traces of chalcopyrite/malachite were noted 1.7 km NW of Leo Lake where a drill core intersection of minor chalcopyrite/sphalerite assayed 0.24% Cu and 0.31% Zn (see Map 832A; Location No. 20, Gale and Eccles, 1988, p. 50-51).

5. Up to 0.5% Cu was reported 2.8 km north of J.S. 7 (Location No. 19, Gale and Eccles, 1988, p. 48-49; Sample No. ABL3, Gale, 1981, p. 54).

Comp./Rev.	SMH	PA
By Date	05-77	09-88

PRODUCT Copper **N.T.S. AREA** 63K/13 SE **REF.** CU 11

NAME OF PROPERTY:
K.D. 1

OWNER OR OPERATOR AND ADDRESS
1988 - Mingold Resources Inc.
Box 28
Toronto-Dominion Centre
Toronto, Ontario
M5K 1B8

OBJECT LOCATED: Sulphide showing **MINING DIVISION** The Pas

Lat. 54° 49.10'	Long. 101° 37.27'	UNCERTAINTY: 200 m
Sec.	Tp. 67	R. 28 WPM

DESCRIPTION OF DEPOSIT

The mineralization area occurs in a north-east trending domal structure that was subjected to faulting and to gentle, easterly folding. A sulphide-bearing fault zone strikes more northerly than the faults to the north and south of it.

Chalcopyrite, pyrite and quartz were found across 1.2 m (4 ft) on surface along a northwest-striking fault zone that cuts a Precambrian quartz-feldspar porphyry dyke consisting of a pink to greyish feldspathic matrix containing 15-20% clear to opalescent light blue quartz phenocrysts. Sulphides were also found by diamond drilling. Drill logs report andesite with lenses and dykes of quartz-feldspar porphyry (Non-confidential Assessment File No. 90436). On surface the volcanics were mapped as rhyodacites and mafic to intermediate flows (Non-confidential Assessment File No. 90417).

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is north of Sourdough Bay of Athapapuskow Lake, approximately 0.8 km east of Mikanagan Lake. Flin Flon is 17 km southwest.

Copper King (30571) was staked by B.B. Syndal in 1921. Surface work was reported in 1925, 1927, and 1934. Drilling was reported on Copper King from 1928 to 1932, inclusive. In 1929, 324 m (1064 ft) of drilling was reported on several claims, including Copper King. Drilling done in other years totalled 274 m (900 ft) on Copper King. The claim was cancelled in 1937.

R. Graham restaked the property as K.G. 2 (P 3926) in 1937. Graham had submitted all drill reports on Copper King. No work was done on K.G. 2, so it was cancelled in 1938.

Associated minerals or products of value
zinc, gold, silver.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Most work occurred on K.D. 1 (P 19456) which was staked by W.J. Kelly in 1948. Surface work was reported in 1950, 1953, and 1961. In 1951, 325 m (1068 ft) of drilling was done in 11 holes (Non-confidential Assessment File No. 90436). Hole 4 cut 2.37% Cu, 0.34 g/t (0.01 oz/ton) Au and 13.03 g/t (0.38 oz/ton) Ag between 1.5 and 3.0 m (5 and 10 ft) below surface. Hole 6 assayed over 1% Cu across a 1.2 m (4 ft) core width, 15 m (50 ft) below the collar. Several holes were abandoned due to overburden difficulties. Geological surveying (Scale 1:4800) was done in 1952 (Non-confidential Assessment File No. 91380).

In 1953, 9 holes, totalling 480 m (1575 ft) were drilled by Mikanagan Mining Company Limited. No assays were reported although "sulphide mineralization, copper, silver, gold, zinc" was noted in most drill logs. Similar mineralization was found on K.D. 2 (P 19457) to the north, which had been explored by 12 drill holes totalling 381 m that year (Non-confidential Assessment File No. 90436).

Later history of K.D. 1 is tabulated below:

Year	Activity
1953	Assigned to Mikanagan Mining Company Limited
1954	An electromagnetic survey found no conductors on K.D. 1 (Non-confidential Assessment File No. 91380)
1955	Cyprus Exploration Corporation took an unregistered option on the property
1963	Cancelled
1963	W.J.K, 1, 2 (P 7115A, 6A) staked by W.J. Kelly
1967	Cancelled
1967	Bill 1, 2 (P 1047D, 8D) staked by W. Le Boutillier and H. Walker, respectively
1968	A horizontal loop EM survey by Tri-J Mineral Surveys Limited for Guggenheim Exploration Company, Inc. found no conductors (Non-confidential Assessment File No. 91944)
1970-71	The property was mapped (Scale 1:4800) by Cerro Mining Company of Canada Limited (Non-confidential Assessment File No. 90417)
1971	Cancelled
1972	CB 3009, area 346 ha, staked by T.W. Bevans and assigned to Hudson Bay Exploration and Development Company Limited (H.B.E.D.); an area (283 ha) to the south was staked as CB 4595 by Glenn Hogarth for H.B.E.D.
1973	H.B.E.D. did an airborne electromagnetic survey in the area under Airborne Permit No. 109 (Non-confidential Assessment File No. 91700)
1973-74	Airborne magnetic and electromagnetic surveys flown by Sherritt Gordon Mines Limited under Airborne Permit No. 114 (Non-confidential Assessment File No. 92020)
1974	A Turam EM survey done by Canadian Oresearch Inc. on behalf of H.B.E.D. located 6 separate anomalies on CB 3009, which were rated as weak to moderately strong (Non-confidential Assessment File No. 92079)

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Year	Activity
1975	A Turam EM survey was done by H.B.E.D. (Non-confidential Assessment File No. 92635)
1976	CB 3009, CB 4595 cancelled
1980	CB 12206 (Gun 12206), area 249 ha, and CB 12207 (Gun 12207), area 259 ha, staked by B. Murray (assisted by J. Custer and A. Sewap) for H.B.E.D. Trenches in the area were examined by the Manitoba Government.
1982	CB 12207 restaked as CB 13402 (Gun 13402), area 256 ha, by Brian Murray (assisted by Darren Wride) for H.B.E.D.
1988	CB 12206 (Gun 12206) and CB 13402 (Gun 13402) transferred to Mingold Resources Inc. (owned by Inspiration Resources Corporation (50%) and Minorco Canada (50%)).

Golden Range Resources Inc. is reportedly carrying out a 1676 m (5500 ft) diamond drill program on the Gun group of claims (Northern Miner, February 1, 1988). The company recently obtained Mingold's properties through a reverse acquisition deal that leaves Mingold the option of buying back a 50.1% controlling interest in it (Northern Miner, September 21, 1987; March 7, 1988).

According to Gale and Eccles (1988), "A chip sample of silicified rock with less than 10% pyrite and several chalcopyrite stringers in sheared feldspar-phyric andesite returned values of 2.62% Cu, 120 ppm Zn, 248 ppb Au and 7 ppm Ag. A quartz sample with 50% pyrite assayed 2.24% Cu, 75 ppm Zn, 214 ppb Au and 5 ppm Ag.".

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Hosain, I.T., 1988: An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 37-47.

Manitoba Mines Branch:
a Annual Report on Mines and Minerals; 25th - p. 74-75.

b Corporation Files; Cyprus Exploration Corporation Ltd.; Mingold Resources Inc.; Golden Range Resources Inc.

c Non-confidential Assessment Files; File Nos. +90417, +90436, 90438, +91380, 91700, 91944, 92020, 92079, 92635.

Wallace, R.C., 1926, The area from Flin Flon northwards to Cold Lake, northern Manitoba; Industrial Development Board, Manitoba, p. 5.

MAP REFERENCES

*Map 63K/13 SE, Flin Flon, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2454G, Flin Flon, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 63K/13a, b, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 348G, C 40 089G, Flin Flon, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000; Province of Manitoba and Geological Survey of Canada (1983).

MAP REFERENCES cont'd

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000; Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Maps OF87-11-5A, OF87-11-5B, Flin Flon, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

#Map 44-22A, Mikanagan Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Bateman and Harrison (1944), Geological Survey of Canada.

Map 832A, Mikanagan Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Bateman and Harrison (1945), Geological Survey of Canada.

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Preliminary Map 1987 F-3, Tartan Lake - Lac Aimee (Geology), Scale 1:15 840, by H.P. Gilbert, Manitoba Mineral Resources Division.

Preliminary Map 1988 F-5, Tartan Lake – Embury Lake, (Geology), Scale 1:15 840, by H.P. Gilbert, Manitoba Mineral Resources Division.

Claim Map Series 63K/13 SE, Scale 1:31 680, circa 1963, Mining Recording, Manitoba Mines Branch.

Airphoto: A19638-100.

REMARKS

1. Wallace (1926) reported the presence of four parallel north-trending chalcopyrite shears in NW striking, SW dipping greenstone, immediately south of the narrows between Aimee Lake and Mikanagan Lake. Pyrite and arsenopyrite were also noted. The shears which occur in the face of a cliff were reportedly trenched by R. Graham, about 1937.

   On Preliminary Map 1987 F-3, a Py-Cu-Zn-Ni-Pb showing is indicated 500 m west of this showing, and a Ni showing is indicated 1.1 km SW, both on Mikanagan Lake.

2. Base metals in traces have been reported at or near the margins of the Tartan Lake gabbroic complex, 3.7 to 8 km NW (see Preliminary Map 1988 F-5). See Location #32 (0.28% Cu, 290 ppm Zn), #33 (700 ppm Cu, 54 ppm Zn, 12 ppb Au), #29 (trace Cu, Zn), #30 (840 ppm Cu, 0.12% Cu, 0.48% Zn, 74 ppm Au), #102 (chalcopyrite) in Gale and Eccles (1988); locations a, b,

REMARKS cont'd

c, d, h in Gilbert (1987, p. 48); and locations c, d, e, g in Gilbert (1986, p. 46); chalcopyrite (1-5%) was reported west of Lac Aimee (NW of Cab 1 claim) (Non-confidential Assessment File No. 90417); a Cu-Ni indication is shown 5.7 km NW on Preliminary Map 1988 F-5. See also Mineral Inventory card 63K/13SW FHS 1, remarks.

3. Diamond drilling of electromagnetic anomalies on the Lit and Bartley groups at Bartley and Sword-fish Lakes found pyrite, pyrrhotite, and copper mineralization. Sphalerite was also noted in drill log from Lit 168. These groups were 3 to 4 km northwest of K.D. 1 (Non-confidential Assessment File No. 90438)

Bruce (1918, p. 3) reports pyrrhotite with minor chalcopyrite south of Tartan Lake. The precise location is not given. It may be in the vicinity of the Lit or Bartley groups, or possibly north, near Animus Lake. Two sulphide symbols are shown on Map 44-22A near Animus Lake.

Comp./Rev.	SMH	PA
By Date	05-77	09-88

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO.** 1019

PRODUCT Copper **N.T.S. AREA** 63K/13 SE **REF.** CU 13

NAME OF PROPERTY:
Whitefish Lake Cu-Mo

OWNER OR OPERATOR AND ADDRESS
1989 - Hudson Bay Exploration and
Development Company Limited
P.O. Box 1500
Flin Flon, Manitoba
R8A 1N9

OBJECT LOCATED: Location #8 on Map MDS87-1 **MINING DIVISION** The Pas

Lat. 54° 46.2' Long. 101° 39.50' UNCERTAINTY: 400 m

Sec. Tp. 67 R. 28 WPM

DESCRIPTION OF DEPOSIT

Chalcopyrite and molybdenite veinlets were found associated with the most intensely altered parts of the Whitefish Lake quartz monzodiorite intrusion. The mineralization occurs in three vertically dipping sets (striking 045°, 065°, and 170°) and one sub-horizontal set of fractures, spaced 4 to 30 cm. Baldwin (1980, p. 12) reports: "Pyrite and chalcopyrite occur as fine grained disseminated patches up to 2 cm across. Molybdenite occurs as rosettes up to 4 mm across and as thin films together with chalcopyrite.". Veins and stringers of chalcopyrite and pyrite appear to parallel a fault zone that extends for at least 700 m to the south (Gale and Eccles, 1988, p. 23). Chalcopyrite-bearing quartz veins have also been reported in the host volcanic rocks (see Fig. 1 and 2).

HISTORY OF EXPLORATION AND DEVELOPMENT

The occurrence is located 400 m northeast of Whitefish Lake, 900 m west of Pineroot River, and 2.6 km south-southwest of Mikanagan Lake.

The area was first staked under P.R. 29 (P 8953) prior to 1947. In 1946, Hudson Bay Exploration and Development Company Limited (H.B.E.D.) optioned the P.R. claims from Sherritt Gordon, and did a magnetometer survey on an adjacent claim (P.R. 38) to the east on which at least 3 drill holes had been spotted (see Map in Non-confidential Assessment File No. 90447).

In 1947, the area was restaked as Dolly 2 (P 17064). In 1951, four holes (15 - 61 m deep) were drilled in the southeast corner of Dolly 2 by A. Talbot on behalf of E.T. Hartnett: pyrite and some chalcopyrite were reported (Non-confidential Assessment File No. 90418). The drilling was probably done to test mineralization in shallow trenches that had been blasted along the strike of a fault zone prior to 1951 (Gale and Eccles, 1988).

Associated minerals or products of value
molybdenum, gold.

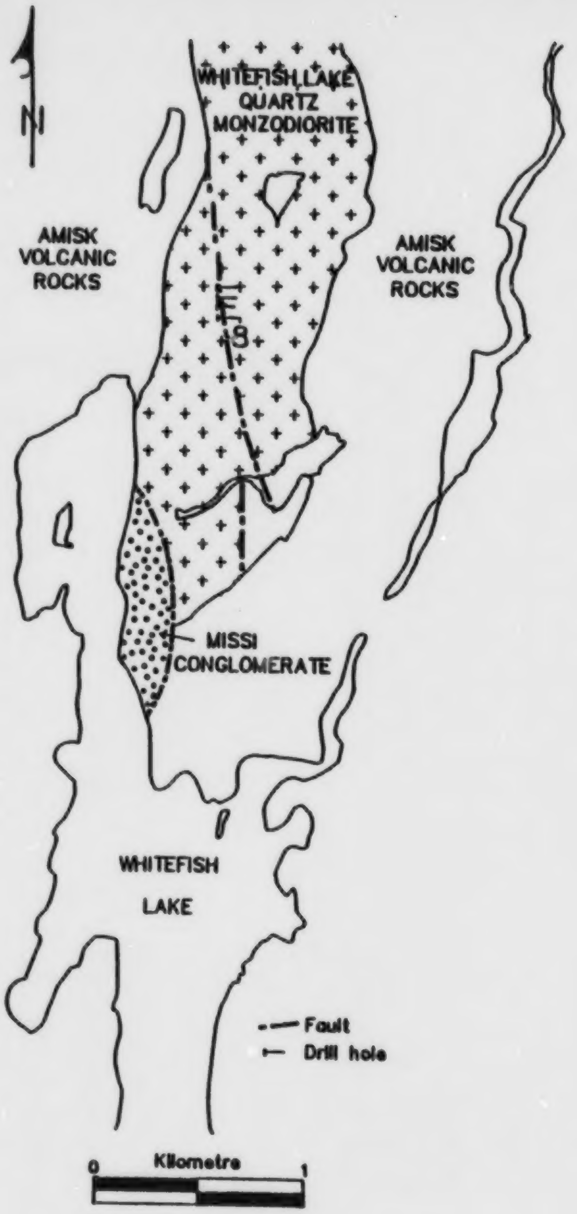
N
WHITEFISH LAKE
QUARTZ
MONZODIORITE
AMISK
VOLCANIC
ROCKS
AMISK
VOLCANIC
ROCKS
8
MISSI
CONGLOMERATE
WHITEFISH
LAKE
Fault
Drill hole
0
Kilometre
1

Figure I: Geological setting of occurrence #8 (63K/13SE). Geology after Baldwin, 1980; Bailes and Syme, 1987.

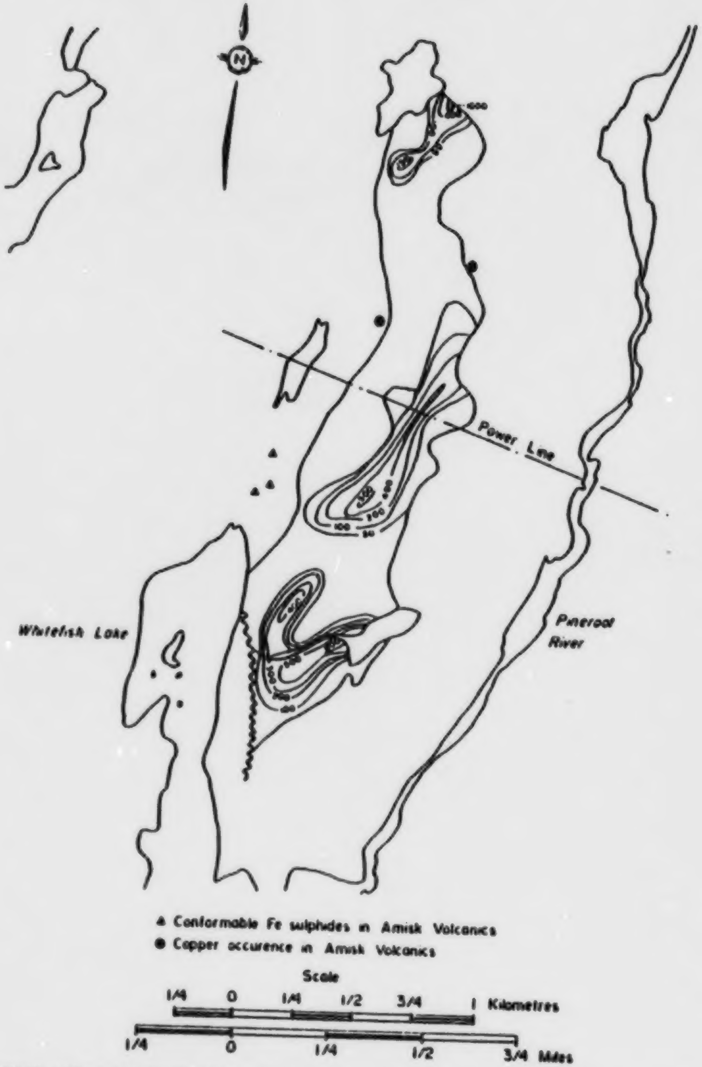
N
Power Line
Whitefish Lake
Pineroot
River
▲ Conformable Fe sulphides in Amisk Volcanics
● Copper occurence in Amisk Volcanics
Scale
1/4
0
1/4
1/2
3/4
1 Kilometres
1/4
0
1/4
1/2
3/4 Miles

FIGURE 2: Distribution of Cu (ppm) in the Whitefish Lake Porphyry, conformable massive sulphide in volcanic rocks (▲) and chalcopyrite in quartz veins in volcanic rocks (●).

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Hudson Bay Mining and Smelting Co., Limited did an EM geophysical survey over the claim area in 1953 (Non-confidential Assessment File No. 90441). Dolly 2 was cancelled around 1957.

Al T. Jacobson staked Pine 12 (P 76914) in 1959 and grouped it with several other claims (Pine 1-23, Pic 1-5, Dig 1-7, Root 1) in 1960.

Pine 12 was assigned to Guggenheim Exploration Company, Inc. in 1967, and grouped with the Bay (No. 9, 15, 16, 19 fr.), Pine (No. 6, 7, 9-13), Root (No. 10-33) claims and Lease M3673 in 1968. Diamond drilling was reported to have been done on the grouping from 1967 to 1971. In 1969, a horizontal loop EM survey was done over the north part of Pine 12 by Tri-J-Mineral Surveys Ltd. for Guggenheim Exploration Company, Inc. (Non-confidential Assessment File No. 90454). The Pine 12 claim lapsed in 1972.

The area was immediately staked as Jan 8 (P 2815E) by Al T. Jacobson. In 1973, the claim was grouped with the Jan 1-9 claims. Airborne surveys were done over the area by H.B.E.D. in 1973, and by Sherritt Gordon Mines Limited in 1973-1974 (Non-confidential Assessment File Nos. 91700, 92020). Jan 8 lapsed in 1974.

Nu 1 (P 4771E) comprising 21 ha, was staked by J. Jerome Studer in 1974 and was assigned to Granges Exploration Aktiebolag in 1976. That year, D. Baldwin (Manitoba Government) examined the area for Cu and Mo mineralization, and reported the presence of Mo flakes and finely disseminated chalcopyrite on fractures in the Whitefish Lake intrusion. Geological and geochemical surveys were carried out by the Manitoba Government in 1979-1981, and a Cu-Mo geochemical anomaly was outlined in the area by Baldwin (1980). Grab samples assayed up to 800 ppm Cu, and up to 24 ppm Mo; one sample returned 800 ppm Cu, 800 ppm Sr, 113 ppm Rb, 69 ppm Zn, 6 ppm Mo in an analysis by atomic absorption (Baldwin, 1980, p. 8-11, 18). Granges Exploration apparently drilled a hole on the property in 1981 (Gale and Eccles, 1988, p. 23).

In 1981, A.L. Parres put down 7 trenches (42.9 m^3 in total) along the north boundary of Nu 1, just inside his claim, CB 5520 (see Remarks). Disseminated chalcopyrite and minor molybdenite was observed. A composite sample assayed 0.65% Cu (Non-confidential Assessment File No. 92789). These trenches were also sampled by the Manitoba Government. A 1.8 kg grab sample of chalcopyrite veins from a 5 m thick mineralized zone in one of the trenches (located on the edge of an overburden-covered depression), assayed up to 1.52% Cu. Other results are shown in Table 1.

In 1982, Nu 1 (P 4771E) was transferred to H.B.E.D.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Table 1. Geochemical results of sampling in the Whitefish Lake area

Sample*	Au (g/t)	Cu%	Mo%	Sample weight (kg)
1. 42-0-WF1	0.343	0.04	NIL	0.68
2. 42-0-WF2	0.343	0.44	NIL	0.90
3. 42-0-WF3	Tr	0.20	NIL	0.45
4. 42-0-WF (0-2 m)	Tr	0.37	NIL	1.47
5. 42-0-WF (2-3 m)	Tr	0.27	NIL	2.15
6. 42-0-WF (3-4 m)	Tr	0.51	NIL	2.15
7. 42-0-WF (4-5 m)	Tr	0.36	NIL	1.93
8. 42-0-WF (T2)	Tr	0.04	NIL	-
9. 42-0-WF (Py)	Tr	0.74	NIL	1.25
10. 42-0-WF (Cp)	Tr	1.52	NIL	1.81

Assays by Manitoba Energy and Mines, 1981.

*Samples: 1-3: Grab samples from A.L. Parres trench; 4-7: Chip samples from A.L. Parres trench, No. 4 at east end of trench; 8: Small trench approximately 15 m east of Parres trench; 9: Pyritic sample (30% pyrite) from A.L. Parres trench; 10: Chalcopyrite-rich portion of Parres trench.

REFERENCES

Bailes, A.H. and Syme, E.C., 1980, White Lake - Mikanagan Lake project; Manitoba Department of Energy and Mines, Mineral Resources Division, Report of Field Activities, 1980, p. 50.

+Baldwin, D., 1977, Disseminated base metal environments; Manitoba Department of Mines, Resources and Environmental Management, Mineral Resources Division, Mineral Evaluation & Administration Branch, Exploration Operations Branch, Report of Field Activities, 1976, p. 22-24.

+Baldwin, D.A., 1980, Porphyritic intrusions and related mineralization in the Flin Flon volcanic belt; Manitoba Department of Energy and Mines, Mineral Resources Division, Economic Geology Report ER79-4, p. 6-12, 18.

Bateman, J.D. and Harrison, J.M., 1944, Mikanagan Lake, Manitoba; Geological Survey of Canada, Paper 44-22, 6p.

Bateman, J.D. and Harrison, J.M., 1944, Geology of the Mikanagan Lake map area; The Precambrian, v. 17, No. 10, p. 6-7, 12.

Bateman, J.D. and Harrison, J.M., 1945, Mikanagan Lake (Marginal Notes); Geological Survey of Canada, Map 832A.

REFERENCES cont'd

+Gale, G.H., 1981, Mineral deposit studies in the Flin Flon area; Manitoba Department of Energy and Mines, Mineral Resources Division, Report of Field Activities, 1981, p. 45-46, 55.

Gale, G.H. and Eccles, D.R., 1988, Mineral deposits and occurrences in the Flin Flon area NTS 63K/13: Part I, Mikanagan area (63K/13SE); Manitoba Energy and Mines, Geological Services, Mineral Deposit Series, Report No. 1, p. 23-27, 96.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 37-47.

Manitoba Mines Branch:
a Mineral Inventory Cards; 63K/13 MO 1.

b Non-confidential Assessment Files; File Nos. +90418, 90441, 90447, 90454, 91700, 92020, +92789.

MAP REFERENCES

Map 63K/13 SE, Flin Flon, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2454G, Flin Flon, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 63K/13a, b, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 348G, C 40 089G, Flin Flon, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000; Province of Manitoba and Geological Survey of Canada (1983).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000; Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Maps OF87-11-5A, OF87-11-5B, Flin Flon, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 44-22A, Mikanagan Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Bateman and Harrison (1944), Geological Survey of Canada.

MAP REFERENCES cont'd

Map 832A, Mikanagan Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Bateman and Harrison (1945), Geological Survey of Canada.

Preliminary Map 1980 W-1, White Lake - Mikanagan Lake, (Geology), Scale 1:20 000, by A.H. Bailes and E.C. Syme, Manitoba Mineral Resources Division.

#Map MDS 87-1, Mikanagan Lake, (Geology), Scale 1:20 000 - Accompanying Report by Gale and Eccles (1988), Manitoba Energy and Mines.

Map GR87-1-1, Flin Flon - White Lake, (Geology), Scale 1:20 000, by A.H. Bailes and E.C. Syme, Geological Services Branch, Manitoba Energy and Mines.

Claim Map Series 63K/13 SE, Scale 1:31 680, circa 1947, Mining Recording, Manitoba Mines Branch.

Airphoto: A16328-201.

REMARKS:

1. Cu-Mo anomalies were outlined 1.74 km north (see 63K/13 MO 1) and 540 m south of this occurrence (Baldwin, 1980). See Figure 2.

2. Copper (Map 44-22A), gold (Map 832A), and magnetite (see Gale and Eccles, 1988, p. 27) were reported 2.06 km south, at Whitefish Lake. A grab sample from a trench located 320 m north of this magnetite showing assayed minor gold and copper (Location No. 9, Gale and Eccles, 1988, p. 27).

3. Solid pyrite was reported 540 m to the northwest (Location No. 117, Gale and Eccles, 1988, p. 118-119).

4. The area just north of Nu 1 was staked under P.R. 29, Dolly 2, Pine 12, followed by Root 19 (P 4219C) in 1966-1971; Jan 2 (P 3159E) in 1971-1976; and CB 5520 in 1977-1988. It is currently open.

Comp./Rev.	PA
By Date	01-89

PRODUCT Fuchsite **N.T.S. AREA** 63K/13 SW **REF.** FHS 1

NAME OF PROPERTY:
Dubnick Lake East

OWNER OR OPERATOR AND ADDRESS
1988 - Hudson Bay Exploration and
Development Company
Limited
P.O. Box 1500
Flin Flon, Manitoba
R8A 1N9

OBJECT LOCATED: Location #37 (MDS Map No.2) **MINING DIVISION** The Pas

Lat. 54° 51.03'	Long. 101° 46.65'	**UNCERTAINTY:** 200 m
Sec.	Tp. 68	R. 29 WPM

DESCRIPTION OF DEPOSIT

The area contains a sulphide-bearing mafic schist zone, and an exposed unit (20 m thick) of a sheared and folded feldspar dyke that contains minor fuchsite (10-20%) and pyrite in the fold hinges. Trenches exposed a 10 cm vein of pyrite, rusty weathering chloritic schist, quartz veins (1-10 cm), and, further east, a 50 cm vein of quartz-carbonate-fuchsite. A sample of chloritic schist returned an assay of 300 ppm Cu, 211 ppm Zn, 24 ppb Au, and less than 1 ppm Ag (Gale and Eccles, 1988).

HISTORY OF EXPLORATION AND DEVELOPMENT

The showing is found near the east end of a long lake (Dubnick Lake), on the south side of a 50 m wide topographic depression. It is approximately 920 m south of Tartan Lake, and 200 m north of the west end of Ruby Lake. The Tartan Lake Mine road is 283 m north.

A gold occurrence was indicated on Map 632A by T.L. Tanton in 1938. Early claim stakings according to old claim maps were as follows:

Claim	Year (approximately)
Blue Bird 3 (P 432)	?
W.P. 7 (P 5823)	19??-1954
W.P. 8 (P 5822)	1954-1976

An airborne EM survey was done by Hudson Bay Exploration and Development Company Limited (H.B.E.D.) in 1973 (Non-confidential Assessment File No. 91700). W.P. 8 was cancelled around 1976. J. Jerome Studer staked CB 9029, area 179 ha, for Granges Exploration Aktiebolag in 1978.

Associated minerals or products of value
gold.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

In 1981, three trenches (2 x 4 x 1 m; 4 x 1 x 1 m; 2.5 x 1 x 0.5 m) and a pit (2 x 3 x 2.5 m) were examined by the Manitoba Government. The claim was transferred to H.B.E.D. in 1982. A sample assay of 55 ppm Cu, 12 ppm Zn, and 11 ppm Ni was reported by Gilbert (1987, p. 48).

REFERENCES

Gale, G.H., 1981, Mineral deposit studies in the Flin Flon area; Manitoba Department of Energy and Mines, Mineral Resources Division, Report of Field Activities, 1981, p. 46, 52.

+Gale, G.H. and Eccles, D.R., 1988, Mineral deposits and occurrences in the Flin Flon area NTS 63K/13: Part II, Flin Flon area (63K/13SW); Manitoba Energy and Mines, Geological Services, Mineral Deposit Series, Report No. 2, p. 18-20, 24, 26.

Gilbert, H.P., 1987, Geological investigations in the Tartan Lake - Lac Aimee area; Manitoba Energy and Mines, Minerals Division, Report of Field Activities, 1987, p. 40, 47-48.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 37-47.

Manitoba Mines Branch:
a Non-confidential Assessment Files; File No. 91700.

Tanton, T.L., 1941, Flin Flon, Saskatchewan and Manitoba (Marginal Notes), Geological Survey of Canada, Map 632A.

Wright, J.F. and Stockwell, C.H., 1933, Gold occurrences of Flin Flon district, Manitoba and Saskatchewan; Geological Survey of Canada, Summary Report 1933, Part C, p. 9-10.

MAP REFERENCES

Map 63K/13, Flin Flon, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2454G, Flin Flon, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000; Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

MAP REFERENCES cont'd

Maps 21242G, 41242G, 63K/13c,d, Manitoba - Saskatchewan, (Total Field and Vertical Gradient), Scale 1:20 000; GSC Open File 1626, Geological Survey of Canada (1987).

Maps C 21 262G, C 41 262G, Flin Flon, (Aeromagnetic Total Field and VLF/EM Total Field profiles; Vertical Gradient and VLF/EM quadrature profiles), Scale 1:50 000, Geological Survey of Canada (1988).

Maps OF87-11-5A, OF87-11-5B, Flin Flon, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 632A, Flin Flon, Saskatchewan and Manitoba, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Tanton (1941), Geological Survey of Canada.

Preliminary Map 1987 F-3, Tartan Lake - Lac Aimee, (Geology), Scale 1:15 840, by H.P. Gilbert, Manitoba Mineral Resources Division.

Preliminary Map 1988 F-5, Tartan Lake - Embury Lake, (Geology), Scale 1:15 840, by H.P. Gilbert, Manitoba Mineral Resources Division.

#Map MDS Map No. 2, Flin Flon area (63K/13SW), (Geology), Scale 1:20 000 - Accompanying Report by Gale and Eccles (1988), Manitoba Energy and Mines.

Claim Map Series 63K/13 SW, Scale 1:31 680, circa 1978, Mining Recording, Manitoba Mines Branch.

Airphoto: A26364-166.

REMARKS

1. Trace chalcopyrite and arsenopyrite occur in schistose greenstone, 525 m ESE, near the shore of Ruby Lake (see Gale, 1981, p. 52; Location No. 36, Gale and Eccles, 1988, p. 18-19; Map 632A).

   Gold (7.89 g/t), silver (5.14 g/t), copper (817 ppm), zinc (37 ppm) and nickel (12 ppm) were reported 680 m east, also on Ruby Lake (Location 'e', Gilbert, 1987, p. 40, 47).

REMARKS cont'd

2. Copper-gold-silver was reported at the west end of Dubnick Lake (see Map 632A; Location 'g', Gilbert, 1987, p. 47-48). A grab sample returned 804 ppm Cu, 94 ppm Zn, 32 ppm Pb, 22 ppm Ni, trace Au, Ag; another sample of rusty weathering chloritic schist returned 440 ppm Cu, 122 ppm Zn, 24 ppb Au (Gilbert, 1987; Location No. 40, Gale and Eccles, 1988, p. 26; Gale, 1981, p. 52).

3. Pyrrhotite, pyrite, disseminated to solid graphite, and/or trace chalcopyrite has been reported in Non-confidential Assessment File Nos. 90468, 90470 (see Location Nos. 125, 128, 130, Gale and Eccles, 1988). Other Cu, Zn, Pb occurrences in 63K/13 SW are shown on Preliminary Map 1988 F-5.

Comp./Rev.	PA
By Date	12-88

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO.** 1021

PRODUCT Molybdenum **N.T.S. AREA** 63K/13 SE **REF.** MO 1

NAME OF PROPERTY:
Race No. 1

OWNER OR OPERATOR AND ADDRESS
1988 - Granges Exploration Ltd.
Ste 2300-885 W. Georgia St.
Vancouver, British Columbia
V6C 2T6

OBJECT LOCATED: Location #89 on Map MDS87-1 **MINING DIVISION** The Pas

Lat. 54° 47.10' Long. 101° 39.36' **UNCERTAINTY:** 200 m

Sec. Tp. 67 R. 28 WPM

DESCRIPTION OF DEPOSIT

The area is underlain by andesitic volcanic rocks and a mudstone, which have been intruded by the chalcopyrite-molybdenite-bearing Whitefish Lake quartz monzodiorite.

"Disseminated pyrite was recorded as a 15 m wide rim around the main intrusive mass. Minor chalcopyrite (up to 1% Cu in selected grab samples) occurs at several places. The mineralization extends into the intrusion..." (Gale and Eccles, 1988). Baldwin (1980) outlined a copper anomaly of 1000 ppm, and a molybdenum anomaly of 75 ppm in this area.

HISTORY OF EXPLORATION AND DEVELOPMENT

The occurrence lies on the east side of a small lake at the north end of the Whitefish Lake pluton. It is approximately 1.96 km north-northeast of Whitefish Lake, 1.12 km southwest of Mikanagan Falls, and 600 m west of Pineroot River.

Early staking of the property was as follows:

Claim	Year (approximate)
Pine	1930
Pine 38 (P 9998)	1946 (probably held by Hudson Bay Exploration and Development Company Limited (H.B.E.D.))
Pin 1 (P 20565)	1948
-no claims staked	1951
Race 1 (P 23957)	1952
Chico 56 (P 30131)	1954
Joe 4 (P 34726)	1956
-no claims staked	1958-1961

Associated minerals or products of value
copper.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

In November 1950, Victor Colcleugh noted two shallow trenches (2.7 x 0.9 x 0.6 m and 4.6 x 1.2 x 0.9 m) that had been blasted around a small area of weak copper showings (Non-confidential Assessment File Nos. 90446, 90449). He mapped the Race group of six claims at a scale of 1:4800 in 1952. The best mineralization was on the Race No. 1 claim: selected grab samples returned 1% Cu (Non-confidential Assessment File No. 90449). (An electromagnetic survey was done on an adjacent claim covering most of the small lake, by Hudson Bay Mining and Smelting Co., Limited in 1953; Non-confidential Assessment File Nos. 90441, 90448).

In 1961, A. Talbot staked Max 3 (P 93928). The claim was cancelled in 1963.

George Grindle staked Root 17 (P 4217C) in 1966, and assigned it to Guggenheim Exploration Company, Inc. in 1967. It was grouped with some of the Bay, Pine and Root group of claims in 1968. Diamond drilling was reportedly done on the grouping in 1967-1970. The claim lapsed in 1971.

In 1972, CB 3012, area 289.8 ha, was staked by T. William Bevans on behalf of H.B.E.D. Airborne surveys were done in the area by H.B.E.D. in 1973, by Sherritt Gordon Mines Limited in 1973-1974, and by Granges Exploration AB in 1974, under Airborne Permit Nos. 109, 114, and 120, respectively (Non-confidential Assessment File Nos. 91700, 92020, 92125). H.B.E.D. did a Turam EM survey in 1974-1975. In 1976, D. Baldwin (Manitoba Government) examined the region for copper and molybdenum mineralization (see 63K/13 CU 13). The claim was cancelled later that year.

In 1978, CB 8539 was staked for A.L. Parres Ltd. by George Lawson (assisted by Wayne Holland). Geological mapping and geochemical surveys were carried out by the Manitoba Government in 1979-1981, and a Cu-Mo geochemical anomaly was outlined in the area by Baldwin (1980). One sample, analyzed by atomic absorption, returned 440 ppm Cu, 76 ppm Mo, 40 ppm Zn, 50 ppm Rb, 800 ppm Sr (Baldwin, 1980:18). The claim lapsed in 1983.

In 1984, Peter Dunlop staked Mik (W 48747), area 171 ha, over the property for W. Bruce Dunlop Limited (N.P.L.). The claim was transferred to BP Resources Canada Ltd. in 1985. W. Bruce Dunlop Limited (N.P.L.) obtained the claim in 1986, and in 1987 transferred it to Granges Exploration Ltd..

REFERENCES

Bailes, A.H. and Syme, E.C., 1980, 1981, White Lake - Mikanagan Lake project; Manitoba Department of Energy and Mines, Mineral Resources Division, Report of Field Activities, 1980, p. 50; 1981, p. 37.

+Baldwin, D., 1977, Disseminated base metal environments; Manitoba Department of Mines, Resources and Environmental Management, Mineral Resources Division, Mineral Evaluation & Administration Branch, Exploration Operations Branch, Report of Field Activities, 1976, p. 22-24.

REFERENCES cont'd

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Davies, J.F., Bannatyne, B.B., Barry, G.S., and McCabe, H.R., 1962, Geology and mineral resources of Manitoba; Manitoba Department of Mines and Natural Resources, Mines Branch, p. 67.

Franklin, J.M. and Thorpe, R.I., 1982, Comparative metallogeny of the Superior, Slave and Churchill Provinces; in Precambrian Sulphide Deposits (ed. R.W. Hutchinson, C.D. Spence and J.M. Franklin); Geological Association of Canada, Special Paper No. 25, p. 37.

Gale, G.H., 1981, Mineral deposit studies in the Flin Flon area; Manitoba Department of Energy and Mines, Mineral Resources Division, Report of Field Activities, 1981, p. 45.

Gale, G.H., Baldwin, D.A., and Koo, J., 1980, A geological evaluation of Precambrian massive sulphide deposit potential in Manitoba; Manitoba Department of Energy and Mines, Mineral Resources Division, Economic Geology Report ER79-1, p. 107.

Gale, G.H. and Eccles, D.R., 1988, Mineral deposits and occurrences in the Flin Flon area NTS 63K/13: Part I, Mikanagan area (63K/13SE); Manitoba Energy and Mines, Geological Services, Mineral Deposit Series, Report No. 1, p. 24-26, 96-97, 132.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 37-47.

Manitoba Mines Branch:
a Mineral Inventory Cards; 63K/13 CU 13.

b Non-confidential Assessment Files; File Nos. 90441, 90446, 90447, 90448, +90449, 91700, 92020, 92125, 92635.

MAP REFERENCES

Map 63K/13 SE, Flin Flon, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

MAP REFERENCES cont'd

Map 2454G, Flin Flon, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 63K/13a, b, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 348G, C 40 089G, Flin Flon, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000; Province of Manitoba and Geological Survey of Canada (1983).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000; Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Maps OF87-11-5A, OF87-11-5B, Flin Flon, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 44-22A, Mikanagan Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Bateman and Harrison (1944), Geological Survey of Canada.

Map 832A, Mikanagan Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Bateman and Harrison (1945), Geological Survey of Canada.

Map, Race Group, (Geology), Scale 1:4800, by V. Colcleugh; in Non-confidential Assessment File No. 90449, Manitoba Mines Branch (1952).

Map ER79-1-15, Cormorant Lake, (Geology), Scale 1:250 000 - Accompanying Report by Gale et al.(1980), Manitoba Mineral Resources Division.

Preliminary Map 1980 W-1, White Lake - Mikanagan Lake, (Geology), Scale 1:20 000, by A.H. Bailes and E.C. Syme, Manitoba Mineral Resources Division.

#Map MDS 87-1, Mikanagan Lake, (Geology), Scale 1:20 000 - Accompanying Report by Gale and Eccles (1988), Manitoba Energy and Mines.

Map GR87-1-1, Flin Flon - White Lake, (Geology), Scale 1:20 000, by A.H. Bailes and E.C. Syme, Geological Services Branch, Manitoba Energy and Mines.

Claim Map Series 63K/13 SE, Scale 1:31 680, circa 1953, Mining Recording, Manitoba Mines Branch.

Airphoto: A26328-202.

NAME OF PROPERTY Race No. 1	**N.T.S. AREA** 63K/13 SE	**FILE NO.** 1021 **REF.** MO 1

REMARKS:

Cu-Mo anomalies were also outlined 1.74 km and 2.3 km south of this occurrence (see 63K/13 CU 13).

Comp./Rev.	PA
By Date	08-88

PRODUCT Nickel **N.T.S. AREA** 63K/13 NE **REF.** NI 1

NAME OF PROPERTY:
Kidd 2

OWNER OR OPERATOR AND ADDRESS
1988 - Open

OBJECT LOCATED: Centre of claim **MINING DIVISION** The Pas

Lat. 54° 57.98' Long. 101° 41.07' **UNCERTAINTY:** 700 m

Sec. Tp. 69 R. 28 WPM

DESCRIPTION OF DEPOSIT

Pyrrhotite and chalcopyrite are disseminated in Precambrian pyroxenite and norite on the northern limb of an antiform. Maps 44-22A and 832A show grandiorite outcropping in this area but none was reported in the drill log. Some gneisses were encountered by drilling (Non-confidential Assessment File No. 90393).

HISTORY OF EXPLORATION AND DEVELOPMENT

The occurrence is near the north shore of Kisseynew Lake, southeast of Lobstick Bay. Flin Flon is approximately 22 km south-southeast.

Early history of the deposit is tabulated below:

1954	Nickel Bell 6 (P 31792) staked by W.J. Kelly
1954	A magnetometer survey found no anomalies here. However, nickel and copper mineralization was found just south of this area, on the Nickel Bell 3 claim (see Remarks).
1957	Cancelled
1960	Jay 12 (P 81037) staked by I. Bjornson
1961	Cancelled

Nickel mineralization was found by diamond drilling on Kidd 2. Kidd 2 (P 295D) was staked by W. Achtemichuk in 1967 and was assigned to Meridian Mining and Exploration Co. Ltd. later that year. A report written in 1968 refers to an earlier electromagnetic survey (Non-confidential Assessment File No. 90392). No details of this survey are known. A magnetometer survey found several small anomalies in 1968. One hole, 148.4 m deep, was drilled on Kidd 2. It yielded a maximum of 0.23% Ni and 0.10% Cu over 1.5 m (5 ft). The nickel assay was taken at a drill depth of 67 m (220 ft) (Non-confidential Assessment File No. 90393). No magnetic anomalies occur near the drill hole, so it may have been done on an electromagnetic anomaly. Kidd 2 was cancelled in 1971.

Associated minerals or products of value
copper

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

In 1980, and airborne EM survey was done by Questor Surveys Limited for Cominco Limited (Non-confidential Assessment File No. 92423).

REFERENCES

Bateman, J.D. and Harrison, J.M., 1944, Mikanagan Lake, Manitoba; Geological Survey of Canada, Paper 44-22, 6p.

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James, D.T., 1983, Origin and metamorphism of the Kisseynew gneisses, Kisseynew Lake - Cacholotte Lake area, Manitoba; M. Sc. Thesis, Carlton University, Ottawa, Ontario, 188p.

Gale, G.H., Baldwin, D.A., and Koo, J., 1980, A geological evaluation of Precambrian massive sulphide deposit potential in Manitoba; Manitoba Department of Energy and Mines, Mineral Resources Division, Economic Geology Report ER79-1, p. 105.

Gale, G.H. and Eccles, D.R., 1988, Mineral deposits and occurrences in the Flin Flon area NTS 63K/13: Part III, Weasel Bay area (63K/13NW) and Defender Lake area (63K/13NE); Manitoba Energy and Mines, Geological Services, Mineral Deposit Series, Report No. 3, p. 28-29.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 47, 94, 98.

Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. 90392, +90393, +90394, 92423.

McRitchie, W.D., 1986, Kisseynew project: geological reconnaissance of Kisseynew Lake West (63K/13NW); Manitoba Energy and Mines, Minerals Division, Report of Field Activities, 1986, p. 96.

Wright, J.F., 1928, Kississing Lake area; Geological Survey of Canada, Summary Report 1928, Part B, p. 73-104.

MAP REFERENCES

Map 63K/13, Flin Flon, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2454G, Flin Flon, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

MAP REFERENCES cont'd

Map 63K/13g, h, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 348G, C 40 089G, Flin Flon, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000; Province of Manitoba and Geological Survey of Canada (1983).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000; Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Maps OF87-11-5A, OF87-11-5B, Flin Flon, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 234A, Kississing Lake area, (Geology), Scale 1:126 720 - Accompanying Report by Wright (1928), Geological Survey of Canada.

*Map 44-22A, Mikanagan Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Bateman and Harrison (1944), Geological Survey of Canada.

Map 832A, Mikanagan Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Bateman and Harrison (1945), Geological Survey of Canada.

Map, (Geology), Scale 1:50 000 - Accompanying Thesis by James (1983), Carlton University.

Map MDS Map No. 3, Weasel Bay (63K/13NW) and Defender Lake (63K/13NE), (Geology), Scale 1:50 000 - Accompanying Report by Gale and Eccles (1988), Manitoba Energy and Mines.

#Claim Map Series 63K/13 NE, Scale 1:31 680, circa 1971, Mining Recording, Manitoba Mines Branch.

Airphoto: A19638-102.

REMARKS

1. Diamond drilling on Kidd 7 and 12 near Kidd 2 yielded very low sulphide values (trace Cu, Ni, Mo); pyrite (20-35%) and rare chalcopyrite in biotite-graphite schists and gneisses were reported (Non-confidential Assessment File No. 90393).

REMARKS cont'd

2. In 1954, it was reported that surface samples fron Nickel Bell 3 returned 0.38-0.74% Ni (in 13 samples), and 0.10-0.25% Cu (in 7 samples). Diamond drilling (320 m) on this claim intersected disseminated pyrrhotite in norite and diorite in 4 of the 5 drill holes, including 60 m of disseminated pyrrhotite in ddh 1; assays from this drilling are not known (Non-confidential Assessment File No. 90394).

3. Pyrrhotite and other sulphides were reported in 63K/13NE (Non-confidential Assessment File Nos. 90391, 90395, 90399, 90400, 90401). No assays are given, so it is not known if the pyrrhotite is nickeliferous (see also Location Nos. 71 and 73, Gale and Eccles, 1988, p. 16, 18). Chalcopyrite (Non-confidential Assessment File No. 90390) and minor malachite (Location No. 74, Gale and Eccles, 1988, p. 19-20) were reported.

Comp./Rev.	SMH	PA
By Date	03-77	12-88

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO.** 707

PRODUCT Pyrite **N.T.S. AREA** 63K/13 NE **REF.** PYR 5

NAME OF PROPERTY:
Wabishkok Lake

OWNER OR OPERATOR AND ADDRESS
1989- John D. Donald
P.O. Box 37
Cranberry Portage, Manitoba
ROB OHO

OBJECT LOCATED: Showing **MINING DIVISION** The Pas

Lat. 54° 52.75' Long. 101° 45.20' UNCERTAINTY. 300 m

Sec. Tp. 68 R. 28 WPM

DESCRIPTION OF DEPOSIT

The showing occurs in quartz veins in slightly foliated Precambrian diorite. Sparse chalcopyrite and sphalerite are associated with pyrite along fractures in the quartz. Gold was reported in assays.

HISTORY OF EXPLORATION AND DEVELOPMENT

The showing is located on a peninsula at the southern narrows of Wabishkok Lake. Flin Flon is approximately 21 km southwest.

Year	Activity
1928	N 6 (43055) staked by D. Austin and assigned to L.D. Baxter
1928	Pits dug
1930	Cancelled
1948	G.A. 6 (P 19562) staked by C. Proudleg
1948	Optioned by Hudson Bay Exploration and Development Company Limited (H.B.E.D.). The earlier pits were cleaned out and sampled, but assays yielded only low copper and gold values (Flin Flon Daily Reminder, August 26, 1948).
1949	Option abandoned
1949	Optioned to Northern Exploration Syndicate. Two short holes, totalling 146 m (478 ft), probed the showing. Maximum assays of 0.33% Cu, 0.20% Zn, with 1.37 g/t (0.04 oz/ton) Au were reported (Northern Exploration Syndicate, Corporation File)
1952	Option abandoned
1957	Cancelled
1970	CB 3399 staked by S. Schiltroth
1973	Airborne EM survey by H.B.E.D. under Airborne Permit No. 109 (Non-confidential Assessment File No. 91700).
1974	Cancelled. Airborne EM and MAG survey by Granges Exploration AB under Airborne Permit No. 120 (Non-confidential Assessment File No. 92125).

Associated minerals or products of value
copper, zinc, gold

NAME OF PROPERTY Wabishkok Lake | **N.T.S. AREA** 63K/13 NE | **FILE NO.** 707 **REF.** PYR 5

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Year	Activity
1977	CB 6016 staked by N. Thurber for H.B.E.D.
1981	The area was examined by the Manitoba Government, and a 2 x 1 x 1.5 m trench was located: 10% pyrite in mafic schists was noted (Gale, 1981).
1983	Cancelled
1985	Lag 4 (P 5323E), area 210 ha, staked by Gerry Angell (assisted by H. Moren) for BP Resources Canada Ltd.
1987	Cancelled
1988	Zir 1 (P 5387E), area 215 ha, staked by John D. Donald.

REFERENCES

+Bruce, E.L., 1918, Amisk-Athapapuskow Lake district; Geological Survey of Canada, Memoir 105, 91p.

+Bateman, J.D. and Harrison, J.M., 1944, Mikanagan Lake, Manitoba; Geological Survey of Canada, Paper 44-22, 6p.

+Bateman, J.D. and Harrison, J.M., 1944, Geology of the Mikanagan Lake map area; The Precambrian, v. 17, No. 10, p. 4-7, 12.

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Gale, G.H., Baldwin, D.A., and Koo, J., 1980, A geological evaluation of Precambrian massive sulphide deposit potential in Manitoba; Manitoba Department of Energy and Mines, Mineral Resources Division, Economic Geology Report ER79-1, p. 105.

Gale, G.H. and Eccles, D.R., 1988, Mineral deposits and occurrences in the Flin Flon area NTS 63K/13: Part III, Weasel Bay area (63K/13NW) and Defender Lake area (63K/13NE); Manitoba Energy and Mines, Geological Services, Mineral Deposit Series, Report No. 3, p. 7-9, 12.

Gilbert, H.P., 1986, Geological investigations in the Tartan Lake - Lac Aimee area; Manitoba Energy and Mines, Minerals Division, Report of Field Activities, 1986, p. 44-46.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 37-47.

REFERENCES cont'd

Manitoba Mines Branch:

a Non-confidential Assessment Files; File Nos. 91700, 92125.

b Corporation Files; Hudson Bay Exploration and Development Company Limited (63K/13NE); Northern Exploration Syndicate (63K/13NE).

c Annual Reports; 22nd, p. 46.

Parberry, D. and Gale, G.H., 1984, Mineral deposit investigations in the Flin Flon area; Manitoba Energy and Mines, Mineral Resources, Report of Field Activities, 1984, p. 60.

MAP REFERENCES

Map 63K/13, Flin Flon, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2454G, Flin Flon, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 63K/13g, h, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 348G, C 40 089G, Flin Flon, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000; Province of Manitoba and Geological Survey of Canada (1983).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000; Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Maps OF87-11-5A, OF87-11-5B, Flin Flon, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

#Map 44-22A, Mikanagan Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Bateman and Harrison (1944), Geological Survey of Canada.

Map 832A, Mikanagan Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Bateman and Harrison (1945), Geological Survey of Canada.

Map MDS Map No. 3, Weasel Bay (63K/13NW) and Defender Lake (63K/13NE), (Geology), Scale 1:50 000 - Accompanying Report by Gale and Eccles (1988), Manitoba Energy and Mines.

#Claim Map Series 63K/13 NE, Scale 1:31 680, circa 1957, Mining Recording, Manitoba Mines Branch.

REMARKS

1. Another sulphide showing is indicated on Map 44-22A approximately 1 km east of the one described on this card, on the east side of the narrows of Wabishkok Lake (Location No. 67, Gale and Eccles, 1988, p. 8-9); Gale (1981, p. 53) noted 30% pyrite in 15 cm thick graphitic schists in the area.

   A Cu-Ni-Zn indication was also noted in this area by Gilbert (1986, p. 44): up to 0.4 m thick zones of massive sulphide with graphite were reported in basalt in a 4 m wide zone, adjacent to a melagabbro sill.

2. Trace chalcopyrite and assays of 2.1-4.1 g/t Au were reported 1.74 km to the east (Location No. 79, Gale and Eccles, 1988, p. 23).

Comp./Rev.	SMH	PA
By Date	10-77	01-89

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO.** 710

PRODUCT Zinc **N.T.S. AREA** 63K/13 SW **REF.** ZN 1

NAME OF PROPERTY:
C.C.F.

OWNER OR OPERATOR AND ADDRESS
1988 - Hudson Bay Exploration and
Development Company
Limited
P.O. Box 1500
Flin Flon, Manitoba
R8A 1N9

OBJECT LOCATED: Cu, Zn, Showing **MINING DIVISION** The Pas

Lat. 54° 46.12' Long. 101° 48.50' UNCERTAINTY: 300 m

Sec. Tp. 67 R. 29 WPM

DESCRIPTION OF DEPOSIT

Sphalerite and chalcopyrite and gold were found in Precambrian volcanics which have been intruded by acid dykes. Heavy disseminations of sphalerite were reported on surface. The mineralized zone (on C.C.F. 2) is exposed for approximately 45 m (Gale and Eccles, 1988). Chalcopyrite occurs south of the main sphalerite showing (Fairway Flinflon, Corporation File).

Several small unconnected sulphide lenses were located by diamond drilling. Sulphides were also reported to fill fractures.

Map 632A indicated the deposit in acid intrusives near dioritic rocks and greenstone.

HISTORY OF EXPLORATION AND DEVELOPMENT

The property is located 0.8 km west of the west shore of Manistikwan Lake, approximately 6.5 km east of Flin Flon. Provincial Road 10 is 0.5 km east.

The first stakings here were made before 1930. This history of these claims cannot be traced (See Remarks).

W.J. Kelly staked C.C.F. 2, 3 (P 9554, 5) in 1945. They were assigned to W.J. Howison in 1946 and were cancelled the following year.

The property was restaked as C.C.F. 2, 3 (P 17512, 3) by C.A. Dilman in 1947. The claims cover 26 ha and 13 ha, respectively. Yearly trenching was done on both claims from 1948 - 1950. In 1951 the claims were assigned to D. Banks, President of Fairway Flinflon Mines Limited. Fairway Flinflon did geological mapping and made an electromagnetic survey. Their consulting geologist reported that selected surface samples assayed more than 12% Zn (Fairway Flinflon, Corporation File).

Associated minerals or products of value
copper.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

C.C.F. 2, 3 were transferred to Fairway Flinflon in 1952. By the end of that year 8 drill holes probed the showing. At least 4 of the holes yielded "negative results" (Fairway Corporation File). Most of the drilling was done on C.C.F. 2. Trenching was also carried out.

Later history of the property is tabulated below:

Year	Activity
1951	Leases M-3912, 13 issued
1966	Assigned to Maverick Mines & Oils Limited
1973	Company's name changed to Peregrine Petroleum Ltd. Hudson Bay Exploration and Development Company Limited (H.B.E.D.) did an airborne EM survey under Airborne Permit No. 109 (Non-confidential Assessment File No. 91700).
1976	Leases converted to claims P 17512, 3
1976	Holder's name changed to H.B.E.D.
1980-81	One drill hole was completed by H.B.E.D. during the winter.
1981	All interest in the claims transferred back to Peregrine Petroleum Ltd. That year, three trenches (5 x 1 x 0.5 m; 4 x 1 x 0.5 m; 2 x 1 x 1 m) were examined by the Manitoba Government: traces of sphalerite and chalcopyrite (and a rusty silicified zone with 10-20% pyrite) were noted near the contact of a medium grained dioritic intrusion and massive basaltic rocks (Gale, 1981, p. 54; Gale and Eccles, 1988, p. 58).
1983	Cancelled. Geological mapping by Manitoba Government since 1982.
1984	Area restaked under Rag 13437 (CB 13437) and Rag 13436 (CB 13436) by Brian Murray, and Warren Heidman, respectively for H.B.E.D. The claims cover 37 ha and 24 ha, respectively.

REFERENCES

C.D., C.C.F., M.S.B., Cliff, Earl, Deanna, Bay, Estherel, Ringo, Shear, SW 13, 63K; Non-confidential portions of Assessment File, Manitoba Mines Branch.

Gale, G.H., 1981, Mineral deposit studies in the Flin Flon area; Manitoba Department of Energy and Mines, Mineral Resources Division, Report of Field Activities, 1981, p. 45-46, 54.

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Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 37-47.

REFERENCES cont'd

Manitoba Mines Branch:
- a Corporation Files; +Fairway Flinflon Mines Limited.
- b Non-confidential Assessment Files; File Nos. 91596, 91700.

Tanton, T.L., 1941, Flin Flon, Saskatchewan and Manitoba (Marginal Notes), Geological Survey of Canada, Map 632A.

MAP REFERENCES

Map 63K/13, Flin Flon, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2454G, Flin Flon, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000; Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/13a, b, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps 21242G, 41242G, 63K/13c,d, Manitoba - Saskatchewan, (Total Field and Vertical Gradient), Scale 1:20 000; GSC Open File 1626, Geological Survey of Canada (1987).

Maps C 21 262G, C 41 262G, Flin Flon, (Aeromagnetic Total Field and VLF/EM Total Field profiles; Vertical Gradient and VLF/EM quadrature profiles), Scale 1:50 000, Geological Survey of Canada (1988).

Maps OF87-11-5A, OF87-11-5B, Flin Flon, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 632A, Flin Flon, Saskatchewan and Manitoba, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Tanton (1941), Geological Survey of Canada.

Preliminary Map 1983 W-1, Flin Flon - Schist Lake, (Geology), Scale 1:20 000, by A.H. Bailes and E.C. Syme, Manitoba Mineral Resources Division.

Map GR87-1-1, Flin Flon - White Lake, (Geology), Scale 1:20 000, by A.H. Bailes and E.C. Syme, Geological Services Branch, Manitoba Energy and Mines.

MAP REFERENCES cont'd

Map MDS Map No. 2, Flin Flon area (63K/13SW), (Geology), Scale 1:20 000 - Accompanying Report by Gale and Eccles (1988), Manitoba Energy and Mines.

Claim Map Series 63K/13 SW, Scale 1:31 680, circa 1977, Mining Recording, Manitoba Mines Branch.

Airphoto: A26397-225.

REMARKS

1. The early stakings of this property cannot be accurately searched because of changes that have occurred on the claim maps. The claims have shifted on the maps through time. It is uncertain which of the early claims on old claim maps covers the area of the present claims, on current claim maps.

2. In 1949, H.B.E.D. drilled an area along the west shore of Manistikwan Lake, east and northeast of this occurrence: traces of Au, Ag, Cu and Zn were found in all samples of drill core that were assayed (Non-confidential Assessment File No. 91596; Gale and Eccles, 1988, p. 42-43).

Comp./Rev.	SMH	PA
By Date	03-77	11-88

PRODUCT Zinc **N.T.S. AREA** 63K/13 SW **REF.** ZN 2

NAME OF PROPERTY:
Deanna 1

OWNER OR OPERATOR AND ADDRESS
1988 - Hudson Bay Exploration and
Development Company
Limited
P.O. Box 1500
Flin Flon, Manitoba
R8A 1N9

OBJECT LOCATED: Cu showing **MINING DIVISION** The Pas

Lat. 54° 45.24' Long. 101° 48.20' **UNCERTAINTY:** 300 m

Sec. Tp. 66 R. 29 WPM

DESCRIPTION OF DEPOSIT

The area is underlain by basalt and basaltic andesite pillowed flows and fragmental rocks (Gale and Eccles, 1988, p. 61).

Sphalerite and pyrite occur in a mineralized zone that strikes north through Precambrian rocks for at least 31 m (100 ft). The zone is over 3.1 m (10 ft) wide. Mineralization is associated with folding.

Andesite, porphyry, and diorite outcrop on Deanna 1. Map 632A indicates two copper showings in greenstone or metadiorite near bodies of porphyry, quartz-diorite, and felsite.

HISTORY OF EXPLORATION AND DEVELOPMENT

The showing is approximately 0.5 km west of Manistikwan Lake. Provincial Road 10 crosses the property 4 km east of Flin Flon.

The table below gives the early history of the property:

Year	Activity
1927	Rex 1 (37330) and 2 (37634) staked by G.S. Jones and E. Johnson, respectively
1927-33	Trenching reported each year on Rex 2 (See Remarks)
1934?	Rex 1 cancelled
1934	Midy 1 (P 2063) staked by G.W. Jones over former Rex 1
1935	Midy 1 cancelled Rex 2 cancelled
1938	Deanna 1 (P 4239) staked by G. W. Jones
1943	Cancelled
1944	Brandon 6, 7 (P 7420, 7411) staked by J. Johnson and P. Skrecky, respectively
1944	Brandon 7 assigned to J. Johnson
1946	One drill hole, 98 m (320 ft), on Brandon 6
1947	Cancelled

Associated minerals or products of value
copper.

NAME OF PROPERTY **FILE NO.** 711
Deanna 1 **N.T.S. AREA** 63K/13 SW **REF.** ZN 2

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Trenching was reported from 1949 to 1951 but during geological mapping in 1951 the only trenches seen were caved in and oxidized (Fairway Flinflon, Corporation File). In 1951 the claim was assigned to D. Banks, president of Fairway Flinflon Mines Limited. A report to Fairway Flinflon that year states that earlier sampling found zinc.

Deanna 1 was assigned to Fairway Flinflon in 1952. By the end of the year three drill holes totalling 223 m (733 ft) had yielded "negative results" (ibid.).

Later history is as follows:

Year	Activity
1956	Lease M-3898 issued
1966	Assigned to Maverick Mines & Oils Limited
1973	Company name changed to Peregrine Petroleum Ltd. An airborne EM survey was done by Hudson Bay Exploration and Development Company Limited (H.B.E.D.) under Airborne Permit No. 109 (Non-confidential Assessment File No. 91700).
1976	Converted to P 18598
1976	Cancelled
1977	CB 5323 staked by H.B.E.D.

REFERENCES

+C.D., C.C.F., M.S.B., Cliff, Earl, Deanna, Bay, Estherel, Ringo, Shear, SW 13, 63K; Non-confidential portions of Assessment File, Manitoba Mines Branch.

Davies, J.F., Bannatyne, B.B., Barry, G.S., and McCabe, H.R., 1962, Geology and mineral resources of Manitoba; Manitoba Department of Mines and Natural Resources, Mines Branch, p. 74.

Gale, G.H. and Eccles, D.R., 1988, Mineral deposits and occurrences in the Flin Flon area NTS 63K/13: Part II, Flin Flon area (63K/13SW); Manitoba Energy and Mines, Geological Services, Mineral Deposit Series, Report No. 2, p. 60-61, 78-79.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 37-47.

Manitoba Mines Branch:
a Corporation Files; +Fairway Flinflon Mines Limited.

b Non-confidential Assessment Files; File Nos. 91596, 91700.

REFERENCES cont'd

c Mining Recording Files; File No. 21266 (Brandon 5).

Tanton, T.L., 1941, Flin Flon, Saskatchewan and Manitoba (Marginal Notes), Geological Survey of Canada, Map 632A.

MAP REFERENCES

Map 63K/13, Flin Flon, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2454G, Flin Flon, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000; Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Maps 21242G, 41242G, 63K/13c,d, Manitoba - Saskatchewan, (Total Field and Vertical Gradient), Scale 1:20 000; GSC Open File 1626, Geological Survey of Canada (1987).

Maps C 21 262G, C 41 262G, Flin Flon, (Aeromagnetic Total Field and VLF/EM Total Field profiles; Vertical Gradient and VLF/EM quadrature profiles), Scale 1:50 000, Geological Survey of Canada (1988).

Maps OF87-11-5A, OF87-11-5B, Flin Flon, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

#Map 632A, Flin Flon, Saskatchewan and Manitoba, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Tanton (1941), Geological Survey of Canada.

Preliminary Map 1983 W-1, Flin Flon - Schist Lake, (Geology), Scale 1:20 000, by A.H. Bailes and E.C. Syme, Manitoba Mineral Resources Division.

Map GR87-1-1, Flin Flon - White Lake, (Geology), Scale 1:20 000, by A.H. Bailes and E.C. Syme, Geological Services Branch, Manitoba Energy and Mines.

Map MDS Map No. 2, Flin Flon area (63K/13SW), (Geology), Scale 1:20 000 - Accompanying Report by Gale and Eccles (1988), Manitoba Energy and Mines.

Claim Map Series 63K/13 SW, Scale 1:31 680, circa 1976, Mining Recording, Manitoba Mines Branch.

Airphoto: A26397-226.

NAME OF PROPERTY Deanna 1	**N.T.S. AREA** 63K/13 SW	**FILE NO.** 711 **REF.** ZN 2

REMARKS

1. Other than the staking information, activity on and cancellation date of Rex 1 are unknown.

2. Minor copper and zinc were reported from the Ringo 3, 4 and 11 claims located 950 m west of the Deanna 1 claim (Fairway Flinflon, Corporation File; Gale and Eccles, 1988, p. 78-79).

Comp./Rev.	SMH	PA
By Date	03-77	12-88

PRODUCT Zinc **N.T.S. AREA** 63K/13 SE **REF.** ZN 3

NAME OF PROPERTY:
Jenny Lake (P.A.W.)

OWNER OR OPERATOR AND ADDRESS
1988 - Hudson Bay Exploration
and Development Company
Limited
P.O. Box 1500
Flin Flon, Manitoba
R8A 1N9

OBJECT LOCATED: Drill hole 1 **MINING DIVISION** The Pas

Lat. 54° 45.41' Long. 101° 30.77' UNCERTAINTY: 500 m

Sec. Tp. 66 R. 27 WPM

DESCRIPTION OF DEPOSIT

A diamond drill hole by Hudson Bay Exploration and Development Company Limited (H.B.E.D.) found sphalerite with pyrite and pyrrhotite in quartz porphyry (Non-confidential Assessment File No. 90443).

Chalcopyrite, pyrite, and magnetite occur in Archean siliceous sediments and quartzite on the surface. The zone of sediments is 671 m (2200 ft) long and strikes northeast. Bands of solid pyrite (1.3 cm wide) were noted in a trench. A body of diorite or granodiorite that outcrops a few metres east of the showing also contains some sulphides (Holloway, 1939).

HISTORY OF EXPLORATION AND DEVELOPMENT

Sulphides were found near the southeastern shore of Jenny Lake, approximately 7 km east of Sourdough Bay of Athapapuskow Lake. Flin Flon is 20.1 km west.

Early history of the property is as follows:

Year	Activity
1935	Pewobic M.C. (P 2456) staked by F. Woodward. Trenching was reported.
1937	Cancelled
1938	P.A.W. 1 (P 4277) staked by F. Woodward Pits and trenches were dug almost every year between 1938 and 1948 inclusive. Geologist J.M. Holloway visited the property in 1939 and reported on the surface showings.

Associated minerals or products of value
copper, gold, nickel.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

In 1949 H.B.E.D. optioned the claim. Three holes totalling 328 m (1076 ft) were diamond drilled the following year. The highest core assay was 1.5% Zn and 1.03 g/t Au over 0.9 m (2.8 ft). Copper values were always less than 0.1%. Up to 0.2% Ni was reported, but most nickel assays were much lower (Non-confidential Assessment File No. 90443). The option was abandoned later in 1950. P.A.W. 1 was cancelled in 1955.

Later history of the property includes the following partial restakings:

Year	Activity
1959	Jen 1 (P 79005) staked by P. Bachnick
1960	Cancelled
1966	Pat (P 5437C) staked by P.Bachnick
1969	Cancelled
1972	CB 4148 staked by P. Bachnick
1973	H.B.E.D. did an airborne electromagnetic survey in the area under Airborne Permit No. 109 (Non-confidential Assessment File No. 91700).
1973-74	Airborne magnetic and electromagnetic surveys flown by Sherritt Gordon Mines Limited under Airborne Permit No. 114 (Non-confidential Assessment File No. 92020).
1974	Surface work reported
1976	Cancelled
1980	CB 10838 (Yap), area 259 ha, staked by D. McDermott (assisted by G. Custer) for H.B.E.D.

REFERENCES

Bateman, J.D. and Harrison, J.M., 1944, Mikanagan Lake, Manitoba; Geological Survey of Canada, Paper 44-22, 6p.

Bateman, J.D. and Harrison, J.M., 1944, Geology of the Mikanagan Lake map area; The Precambrian, v. 17, No. 10, p. 6-7, 12.

Bateman, J.D. and Harrison, J.M., 1945, Mikanagan Lake (Marginal Notes); Geological Survey of Canada, Map 832A.

Gale, G.H., 1981, Mineral deposit studies in the Flin Flon area; Manitoba Department of Energy and Mines, Mineral Resources Division, Report of Field Activities, 1981, p. 46.

Gale, G.H., Baldwin, D.A., and Koo, J., 1980, A geological evaluation of Precambrian massive sulphide deposit potential in Manitoba; Manitoba Department of Energy and Mines, Mineral Resources Division, Economic Geology Report ER79-1, p. 106.

REFERENCES cont'd

Gale, G.H. and Eccles, D.R., 1988, Mineral deposits and occurrences in the Flin Flon area NTS 63K/13: Part I, Mikanagan area (63K/13SE); Manitoba Energy and Mines, Geological Services, Mineral Deposit Series, Report No. 1, p. 54-55, 126-127.

+Holloway, J.M., 1939, Youth training prospect, P.A.W., M.C.'s; in Manitoba Mines Branch, Unpublished Information Files (63K/13 SE).

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 37-47.

Manitoba Mines Branch:
a Mining Recording Files (The Pas); File Nos. 17240 (Cumsha 9); 17233 (P.A.W., M.C.).

b Non-confidential Assessment Files; File Nos. +90443, 91700, 92020.

c Unpublished Information Files; 63K/13 SE.

MAP REFERENCES

*Map 63K/13 SE, Flin Flon, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2454G, Flin Flon, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 63K/13a, b, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 348G, C 40 089G, Flin Flon, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000; Province of Manitoba and Geological Survey of Canada (1983).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000; Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Maps OF87-11-5A, OF87-11-5B, Flin Flon, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

MAP REFERENCES cont'd

Map 44-22A, Mikanagan Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Bateman and Harrison (1944), Geological Survey of Canada.

Map 832A, Mikanagan Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Bateman and Harrison (1945), Geological Survey of Canada.

Map ER79-1-15, Cormorant Lake, (Geology), Scale 1:250 000 - Accompanying Report by Gale et al.(1980), Manitoba Mineral Resources Division.

Map MDS 87-1, Mikanagan Lake, (Geology), Scale 1:20 000 - Accompanying Report by Gale and Eccles (1988), Manitoba Energy and Mines.

#Map A-408, Woodward option, (Drill Plan), Scale 1:600; in Non-confidential Assessment File No. 90443, Manitoba Mines Branch.

Claim Map Series 63K/13 SE, Scale 1:31 680, circa 1953, Mining Recording, Manitoba Mines Branch.

Airphoto: A26398-95.

REMARKS

1. Another showing was reported by Holloway (1939) approximately 1.04 km (3400 ft) southwest of the showing described on this card. Unfortunately Holloway's drawing of the claims bears little resemblance to claim maps and prospectors claim sketches. This southern showing probably occurred on Cumsha 9. H.B.E.D. drilled two holes on Cumsha 9, but found only pyrite and pyrrhotite.

   Holloway reported chalcopyrite, galena, and pyrite in surface exposures of siliceous sediments. The showing is indicated on Maps 832A and 44-22A. Gold may have been found here. Sphalerite, chalcopyrite, and pyrite in quartz stringers and quartzite were noted in a trench on P.A.W. 4 (2 km SW of the showing) by Holloway (1939). (See Gale and Eccles, 1988, p. 126-127).

Comp./Rev.	SMH	PA
By Date	04-77	09-88

PRODUCT Zinc	**N.T.S. AREA** 63K/13 SE	**REF.** ZN 4

NAME OF PROPERTY:
Sulphide 3

OWNER OR OPERATOR AND ADDRESS
1988 - Hudson Bay Exploration
and Development Company
Limited
P.O. Box 1500
Flin Flon, Manitoba
R8A 1N9

OBJECT LOCATED: Drill hole (No. 5) **MINING DIVISION** The Pas

Lat. 54° 45.52'	Long. 101° 41.49'	UNCERTAINTY: 200 m
Sec.	Tp. 66	R. 28 WPM

DESCRIPTION OF DEPOSIT

The area is underlain by ferrobasalts, andesite tuff, massive rhyolite lobes and mafic intrusions (gabbroic and dioritic) to the east and west (Gale and Eccles, 1988).

Diamond drilling found disseminated to semi-massive sulphides in Archean rhyolite, breccia, light green dacite, slightly chloritic andesite, and quartz-feldspar prophyry. One almost massive (60% sulphides) section formed a conductor in breccia and porphyry. Pyrrhotite was the predominant sulphide. Pyrite, pyrrhotite, chalcopyrite, sphalerite, and minor galena were reported in another hole. The highest assays were in rhyolite that is often highly silicified, fractured and brecciated (Non-confidential Assessment File Nos. 90458-61).

HISTORY OF EXPLORATION AND DEVELOPMENT

The occurrence lies between Bear Lake and Whitefish Lake, approximately 3.75 km west of the road along Sourdough Bay. The claim area is near the west and southwest shore of Two Portage Lake (formerly, Blackfoot Lake).

A.E. Linton made the first staking here in 1928 when he claimed Rose (45007). It was assigned to J. Martin later that year. Pits were dug before Rose was cancelled in 1931.

H.B.E.D. 79 (P 6172) was staked by G.M. Proudfoot in 1942 and was assigned to Hudson Bay Exploration and Development Company Limited (H.B.E.D.) shortly afterward. Some work may have been done before the claim was transferred to Hudson Bay Mining and Smelting Co., Limited and went to lease as M-2199 in 1949. The area re-opened for staking in 1958.

Associated minerals or products of value
lead, copper, silver, gold, nickel.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Sulphide 3 (P 76583) was staked in 1959 by G.F. Thompson. Later that year two holes were diamond drilled. Drill logs report sulphides of iron, copper, zinc, and lead, but no assays (Non-confidential Assessment File No. 90460). A hole was also drilled in 1965 (Non-confidential Assessment File No. 90458).

Three holes in 1968 totalled 644 m (2114 ft). Drill core assays of 2.84% Zn, 0.2% Cu, 8.9 g/t (0.26 oz/ton) Ag, and 0.7 g/t (0.02 oz/ton) Au between 57.5 m and 58.2 m (188.5 - 191.0 ft), and 1.83% Zn, 0.15% Cu, 0.51% Pb, 23.3 g/t (0.68 oz/ton) Ag, 2.1 g/t (0.06 oz/ton) Au between 60 - 60.6 m (197-199 ft), were reported for DDH 4 (collared approximately 250 m west of the lake) (Non-confidential Assessment File No. 90459). DDH 1 (approximately 200 m north of DDH 5) intersected 2.7 m (9 ft) of 0.35% Pb at a depth of 168 m (551 ft), and also returned values of up to 0.12% Cu, 0.3 g/t (0.01 oz/ton) Au and 1.4 g/t (0.04 oz/ton) Ag in other sections of core; sphalerite was noted (Non-confidential Assessment File No. 90459). Another hole (DDH 18) located a conductive zone of 60% massive sulphides between 62 - 71 m (202.5 - 233 ft) and returned an assay of 4.1 g/t (0.12 oz/ton) Ag over 1.5 m (5 ft) (Non-confidential Assessment File No. 90461). The 1968 drilling was done on behalf of Pineroot Mineral Enterprises and Guggenheim Exploration Company, Inc. Sulphide 3 was cancelled in 1971.

Two weeks after the cancellation of Sulphide 3, T.W. Bevans staked Wan 313 (P 2922E), area 21 ha. The claim was assigned to H.B.E.D. later in 1971. A Turam survey was made in 1973 and some drilling may have been done. Results are confidential at present. Airborne surveys were done in the area about 1973-1974 by H.B.E.D. under Airborne Permit No. 109 and by Sherritt Gordon Mines Limited under Airborne Permit No. 114 (Non-confidential Assessment File Nos. 91700, 92020).

In 1979-1981, A.H. Bailes and E.C. Syme (Geological Services Branch, Manitoba Government) mapped the area.

REFERENCES

Bailes, A.H., 1971, Preliminary compilation of the geology of the Snow Lake - Flin Flon - Sherridon area; Manitoba Department of Mines and Natural Resources, Mines Branch, Geological Paper 1/71, 27p.

Bailes, A.H. and Syme, E.C., 1979-1981, White Lake - Mikanagan Lake project (parts of 63K/12 and 13); Manitoba Department of Mines, Natural Resources and Environment, Mineral Resources Division, Report of Field Activities, 1979, p. 46-54; 1980, p. 43-50; 1981, p. 37-38.

Bateman, J.D. and Harrison, J.M., 1944, Mikanagan Lake, Manitoba; Geological Survey of Canada, Paper 44-22, 6p.

Bateman, J.D. and Harrison, J.M., 1944, Geology of the Mikanagan Lake map area; The Precambrian, v. 17, No. 10, p. 6-7, 12.

REFERENCES

Bateman, J.D. and Harrison, J.M., 1945, Mikanagan Lake (Marginal Notes); Geological Survey of Canada, Map 832A.

Gale, G.H., Baldwin, D.A., and Koo, J., 1980, A geological evaluation of Precambrian massive sulphide deposit potential in Manitoba; Manitoba Department of Energy and Mines, Mineral Resources Division, Economic Geology Report ER79-1, p. 106.

Gale, G.H. and Eccles, D.R., 1988, Mineral deposits and occurrences in the Flin Flon area NTS 63K/13: Part I, Mikanagan area (63K/13SE); Manitoba Energy and Mines, Geological Services, Mineral Deposit Series, Report No. 1, p. 86-87.

Hosain, I.T., 1980: Summary of results of geophysical data compilation from open assessment reports Flin Flon - Snow Lake and Bird River Greenstone Belts; Manitoba Department of Energy and Mines, Mineral Resources Division, Economic Geology Paper EP79-1, p. 2.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 37-47.

Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. 90458, +90459, 90460, 90461, 91700, 92020.

MAP REFERENCES

Map 63K/13 SE, Flin Flon, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2454G, Flin Flon, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 63K/13a, b, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 348G, C 40 089G, Flin Flon, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000; Province of Manitoba and Geological Survey of Canada (1983).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000; Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map EP79-1-2, Flin Flon - Snow Lake (Airborne geophysical compilation), Scale 1:1 000 000 - Accompanying Paper by Hosain (1980), Manitoba Mineral Resources Division.

MAP REFERENCES cont'd

Maps OF87-11-5A, OF87-11-5B, Flin Flon, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

*Map 44-22A, Mikanagan Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Bateman and Harrison (1944), Geological Survey of Canada.

Map 832A, Mikanagan Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Bateman and Harrison (1945), Geological Survey of Canada.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Map ER79-1-15, Cormorant Lake, (Geology), Scale 1:250 000 - Accompanying Report by Gale et al.(1980), Manitoba Mineral Resources Division.

Preliminary Map 1980 W-1, White Lake - Mikanagan Lake (Geology), Scale 1:20 000, by A.H. Bailes and E.C. Syme, Manitoba Mineral Resources Division.

Map GR87-1-1, Flin Flon - White Lake (Geology), Scale 1:20 000, by A.H. Bailes and E.C. Syme, Geological Services Branch, Manitoba Energy and Mines.

Map MDS 87-1, Mikanagan Lake, (Geology), Scale 1:20 000 - Accompanying Report by Gale and Eccles (1988), Manitoba Energy and Mines.

#Map 68-020, Blackfoot Lake drill plan, (Drilling), Scale 1:4800; in Non-confidential Assessment File No. 90459, Manitoba Mines Branch.

Claim Map Series 63K/13 SE, Scale 1:31 680, circa 1970, Mining Recording, Manitoba Mines Branch.

Airphotos A26397-121, 122.

REMARKS

1. Drill core assays reported for DDH 2 (drilled 300 m north of DDH 5, on Sulphide 4 (P 76584)) were: 0.12% Cu, 0.04% Ni, 3.43 g/t (0.10 oz/ton) Ag, trace Au, over 2.6 m at a drill depth of 74 m; and 0.34 g/t (0.01 oz/ton) Au over 2 m, 1.8 m, 3 m, and 3 m long sections of core. Sphalerite was also noted in the core (Non-confidential Assessment File No. 90459).
2. A gold showing is indicated on Maps 44-22A and 832A less than 200 m south of the zinc occurrence. Nothing further is known about the gold.
3. Minor zinc (0.40%) and copper (0.15% over 0.3 m) was reported 1.94 km west (Non-confidential Assessment File No. 91611).

Comp./Rev.	SMH	PA
By Date	10-77	09-88

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO.** 1022

PRODUCT Zinc **N.T.S. AREA** 63K/13 SE **REF.** ZN 5

NAME OF PROPERTY:
Big Island Lake

OWNER OR OPERATOR AND ADDRESS
1988 - Westfield Minerals Limited
Ste 2701,
1 First Canadian Place
Toronto, Ontario
M5X 1C7

OBJECT LOCATED: Location #124 on Map MDS87-1 **MINING DIVISION** The Pas

Lat. 54° 48.36' Long. 101° 43.75' **UNCERTAINTY:** 200 m

Sec. Tp. 67 R. 29 WPM

DESCRIPTION OF DEPOSIT

The area is underlain by mafic to intermediate flow rocks. Altered felsic and dacitic rocks were encountered in drill holes in the vicinity of the occurrence (Non-confidential Assessment File No. 90438; Gale and Eccles, 1988). Extensive carbonatization occurs north of the deposit.

Three south-plunging, en echelon, massive sulphide zones varying from 1.8 to 7.6 m (6-25 ft) in thickness were outlined over a length of approximately 91 m (see Fig. 1 and Fig. 2). The mineralization extends at least 107 m (350 ft) vertically and 122 m (400 ft) down-dip, and is offset by faulting at a depth of 91 m (300 ft). According to Ferreira and Gale (1988, p. 69), the deposit consists of a solid sulphide lens and a zone of post-deformation sulphide veins and veinlets, which are hosted by altered rhyolite and mafic to intermediate tuffaceous rocks. Sulphide mineralization consists of sphalerite, pyrrhotite, pyrite, chalcopyrite, and gold.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located approximately 1.38 km east of Manistikwan (Big Island) Lake, 3.9 km south of Tartan Lake, and 180 m east of a small unnamed lake. Flin Flon is about 8.1 km southwest.

Lit 147 (P 24941) was recorded about 1952. In 1952, Hudson Bay Mining and Smelting Co., Limited carried out a ground EM survey in the area, and a conductor was noted 340 m southeast, on the Lit 140 claim (Non-confidential Assessment File No. 90437). The conductor was drilled to a depth of 113 m (369 ft) in 1953 and intersections of disseminated to near-solid pyrite and/or pyrrhotite, and minor chalcopyrite in graphitic, chloritic and sericitic schists, dacite, rhyolite breccia and silicified rhyolite, were logged in the core (Non-confidential Assessment File No. 90438). The area re-opened for staking around 1956.

Associated minerals or products of value
gold, silver, copper.

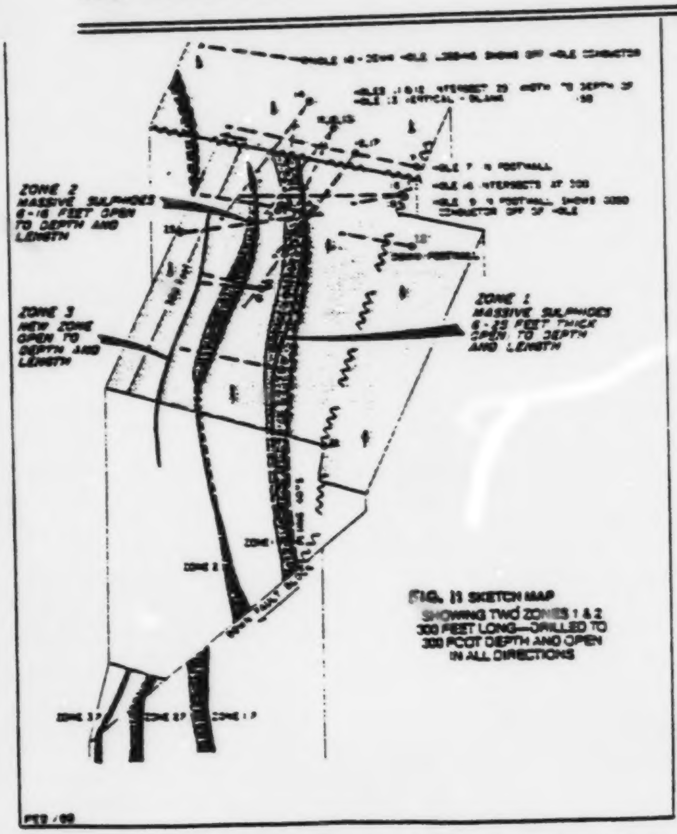
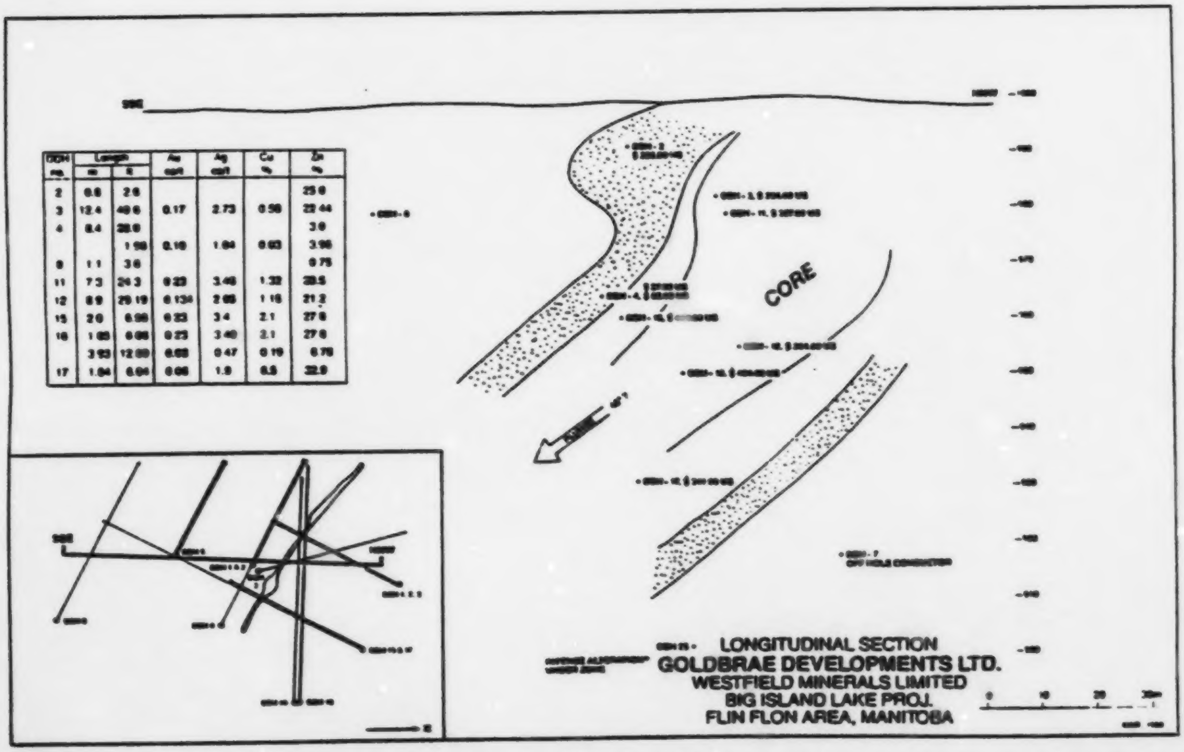

ZONE 2
MASSIVE SULPHIDES
6-16 FEET OPEN
TO DEPTH AND
LENGTH
ZONE 3
NEW ZONE
OPEN TO
DEPTH AND
LENGTH
ZONE 1
MASSIVE SULPHIDES
6-25 FEET THICK
OPEN TO DEPTH
AND LENGTH
ZONE 1
ZONE 2
ZONE 3 P
ZONE 2 P
ZONE 1 P
FEB /89

FIG. 1 SKETCH MAP
SHOWING TWO ZONES 1 & 2
300 FEET LONG—DRILLED TO
300 FOOT DEPTH AND OPEN
IN ALL DIRECTIONS

(source: Manitoba Mines Branch b), Goldbrae Developments Ltd.)



DDH no.	Length m	Length ft	Au oz/t	Ag oz/t	Cu %	Zn %
2	0.8	2.6				25.8
3	12.4	40.6	0.17	2.73	0.58	22.44
4	8.4	28.0				3.0
		1.90	0.10	1.04	0.83	3.96
9	1.1	3.6				0.75
11	7.3	24.3	0.23	3.40	1.32	28.5
12	8.9	29.19	0.134	2.65	1.16	21.2
15	2.0	6.56	0.23	3.4	2.1	27.8
16	1.85	6.06	0.23	3.40	2.1	27.8
	3.93	12.89	0.03	0.47	0.19	0.75
17	1.84	6.04	0.06	1.9	6.5	22.9

CORE
0
10
20
30m

LONGITUDINAL SECTION
GOLDBRAE DEVELOPMENTS LTD.
WESTFIELD MINERALS LIMITED
BIG ISLAND LAKE PROJ.
FLIN FLON AREA, MANITOBA

Fig.2 Longitudinal section (source: Manitoba Mines Branch b), Goldbrae Developments Ltd.)

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

In 1970, CB 2857 comprising 376 ha was staked by George Grindle. The claim was cancelled in 1972. Airborne surveys were carried out in the area by Hudson Bay Exploration and Development Company Limited (H.B.E.D.) in 1973, and by Granges Exploration AB in 1974 under Airborne Permit Nos. 109 and 120, respectively (Non-confidential Assessment File Nos. 91700, 92125).

CB 5073, area 84 ha, was staked by Neal Thurber and H. Guymer on behalf of H.B.E.D. in 1977. The claim was grouped with claims CB 6004, CB 6018, CB 5303, P 3845E, P 3849E in 1978 and with CB 6017, Cb 6018, CB 10835 - 37 in 1981. The claim lapsed in 1983.

In 1984, Thomas Moodie staked Mik-10 (W 48545), area 135 ha, for James E. McInnes. Westfield Minerals Limited completed a surface prospecting and soil sampling program in 1986: grab samples of mineralized altered rocks yielded assays of up to 3.77 g/t (0.11 oz/ton) Au, while soil samples returned assays ranging from 100 to 2100 ppb Au (Northern Miner, November 10, 1986). The property was apparently held under option from Goldbrae Developments Ltd.

In May, 1987, Mik-10 (W 48545) was grouped with claims W 48538 - 39, W 48541 - 47. James E. McInnes transferred the claim to Goldbrae Developments Ltd. on August 11, 1987. On August 24, 1987, all interest in the property was transferred to Westfield Minerals Limited (48%-owned subsidiary of Northgate Exploration Limited). A $1.285 million, 5-year exploration program which would enable Westfield to earn a 70% interest in the project was started that year.

Westfield, the project operator, followed up the 1986 gold geochemical anomalies with trenching: two trenches, 31 m apart, exposed altered rhyolitic rocks near a north-trending shear zone and a 6-12 m (20-40 ft) wide gossan zone that returned channel-sample assays of 9.26 g/t (0.27 oz/ton) Au over 3.5 m (11.5 ft), and 6.86 g/t (0.2 oz/ton) Au over 1.9 m (6.5 ft) (Northern Miner, September 7, 1987). Bedrock sample assays of 1.7 - 3.4 g/t (0.05 - 0.1 oz/ton) Au were reported. A 914 m (3000 ft) follow-up diamond drill program was planned for the fall of 1987.

Nine of the first twelve drill holes encountered economic mineralization within a 200 m area (Fig. 2). Drill hole No. 3 intersected 12 m (40.7 ft) grading 5.8 g/t (0.17 oz/ton) Au, 93.6 g/t (2.73 oz/ton) Ag, 0.58% Cu and 22.44% Zn, and 9 m (29.2 ft) grading 7.2 g/t (0.21 oz/ton) Au, 117.3 g/t (3.42 oz/ton) Ag, 0.78% Cu and 23.4% Zn; Drill hole 1 cut 0.5 m (1.6 ft) grading 6.34% Zn, 1.29% Cu, 162.9 g/t (4.75 oz/ton) Ag, and 53.5 g/t (1.56 oz/ton) Au (Northern Miner, November 23, 1987).

By the end of 1987, Westfield had earned a 50% interest in the project. A $1.5 million exploration program consisting of diamond drilling (9144 m), magnetometer, VLF-EM and deep penetrating pulse EM work was planned for the first half of 1988.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

From January to March 1988, 5791 m of diamond drilling was completed, and a 181 488 tonne (200 000 ton) deposit was outlined (Northern Miner, May 2 and June 13, 1988). Geophysical surveys were also completed. The following drilling results were reported (Northern Miner, May 9, 1988):

Hole	Length m	Depth m	Zn%	Cu%	Ag (g/t)	Au (g/t)
88-25	8.8	-	12.28	1.62	72	4.1
88-36	0.8	122.1	17.7*	-	-	2.1
	1.6	150.9	4.3	-	-	0.3
88-40	1.0	176.9	-	1.6	-	8.9
	2.9	192.6	5.6	0.35	18.2	1.03
88-41**	19.6	72.1	14.55	1.72	58.6	3.1
	3.6	96.9	5.8	-	-	-

*Reported as 7.7% Zn in Northern Miner, May 2, 1988.
**Hole 41 intersected 7.6 - 10.7 m (true width) of mineralization.

A further 3048 m (10 000 ft) of drilling is planned. The Company also intends to explore other parts of the property by prospecting, soil sampling, and trenching in 1988 (Northern Miner, June 13, 1988).

The Manitoba Government carried out a six week, 1:2000 scale, geological mapping program in the area in 1988 (Ferreira and Gale, 1988).

REFERENCES

Bateman, J.D. and Harrison, J.M., 1944, Mikanagan Lake, Manitoba; Geological Survey of Canada, Paper 44-22, 6p.

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Bateman, J.D. and Harrison, J.M., 1945, Mikanagan Lake (Marginal Notes); Geological Survey of Canada, Map 832A.

Ferreira, K. and Gale, G.H., 1988, Geological setting of the Big Island zinc property, Shore Lake area, Flin FLon; in Manitoba Energy and Mines, Minerals Division, Report of Field Activities, 1988, p. 66-71.

Gale, G.H., Baldwin, D.A., and Koo, J., 1980, A geological evaluation of Precambrian massive sulphide deposit potential in Manitoba; Manitoba Department of Energy and Mines, Mineral Resources Division, Economic Geology Report ER79-1, p. 105.

REFERENCES cont'd

+Gale, G.H. and Eccles, D.R., 1988, Mineral deposits and occurrences in the Flin Flon area NTS 63K/13: Part I, Mikanagan area (63K/13SE); Manitoba Energy and Mines, Geological Services, Mineral Deposit Series, Report No. 1, p. 114-115, 130-131.

Hosain, I.T., 1978, Summary and evaluation of the geophysical data from the open assessment files of the Flin Flon - Snow Lake greenstone belt; Manitoba Department of Mines, Resources & Environmental Management, Mineral Resources Division, MRD Open File Report 78/2, p. 16.

Hosain, I.T., 1980, Summary of results of geophysical data compilation from open assessment reports Flin Flon - Snow Lake and Bird River greenstone belts; Manitoba Department of Energy and Mines, Mineral Resources Division, Economic Geology Paper EP79-1, p. 2.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 37-47.

Manitoba Mines Branch:
a Corporation Files; Goldbrae Developments Ltd.; Westfield Minerals Limited.

b Non-confidential Assessment Files; File Nos. 90437, 90438, 91700, 92125.

Mining Journal,
1987, v. 309, No. 794, p. 440.
1988, v. 310, No. 796, p. 369.

Mining Magazine, 1988, v. 158, No. 6, p. 455.

Northern Miner, The,
1986, November 10
1987, September 7, November 23
1988, January 25, March 28, May 2, May 9, June 13

North West Prospector, February/March 1988.

MAP REFERENCES

Map 63K/13 SE, Flin Flon, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2454G, Flin Flon, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 63K/13a, b, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

MAP REFERENCES cont'd

Maps C 20 348G, C 40 089G, Flin Flon, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000; Province of Manitoba and Geological Survey of Canada (1983).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000; Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map EP79-1-2, Flin Flon - Snow Lake, (Airborne geophysical compilation), Scale 1:1 000 000 - Accompanying Paper by Hosain (1980), Manitoba Mineral Resources Division.

Maps OF87-11-5A, OF87-11-5B, Flin Flon, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 44-22A, Mikanagan Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Bateman and Harrison (1944), Geological Survey of Canada.

Map 832A, Mikanagan Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Bateman and Harrison (1945), Geological Survey of Canada.

Map ER79-1-15, Cormorant Lake, (Geology), Scale 1:250 000 - Accompanying Report by Gale et al.(1980), Manitoba Mineral Resources Division.

Preliminary Map 1980 W-1, White Lake - Mikanagan Lake, (Geology), Scale 1:20 000, by A.H. Bailes and E.C. Syme, Manitoba Mineral Resources Division.

#Map MDS 87-1, Mikanagan Lake, (Geology), Scale 1:20 000 - Accompanying Report by Gale and Eccles (1988), Manitoba Energy and Mines.

Map GR87-1-1, Flin Flon - White Lake, (Geology), Scale 1:20 000, by A.H. Bailes and E.C. Syme, Geological Services Branch, Manitoba Energy and Mines.

Claim Map Series 63K/13 SE, Scale 1:31 680, circa 1953, 1985, Mining Recording, Manitoba Mines Branch.

REMARKS:
Minor chalcopyrite and/or sphalerite was encountered by drilling, 1.8 km northwest, 3.2 km southwest and 1.9 km south of this area (Location Nos. 50, 104 to 108, 123, Gale and Eccles, 1988, p. 85, 111-117, 128-129).

Comp./Rev. PA
By Date 09-88

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO. 1023**

PRODUCT Zinc **N.T.S. AREA** 63K/13 NE **REF.** ZN 6

NAME OF PROPERTY:
Wabishkok Lake West

OWNER OR OPERATOR AND ADDRESS
1988 - Mingold Resources Inc.
Box 28
Toronto Dominion Centre
Toronto, Ontario
M5K 1B8

OBJECT LOCATED: Drill hole (Gun-35) **MINING DIVISION** The Pas

Lat. 54° 53.50'	Long. 101° 38.25'	UNCERTAINTY. 400 m
Sec.	Tp. 68	R. 28 WPM

DESCRIPTION OF DEPOSIT

Gabbro, hornblende-biotite-chlorite-quartz schists, quartz diorite, quartz-feldspar porphyry, quartz-calcite stringers, and some garnet, were encountered by drilling. DDH Gun-35 intersected 4.9 m (16 ft) of pyrrhotite (up to 5%), pyrite, and traces of sphalerite (up to 1%) and chalcopyrite, at a drill depth of 66.4 m.

HISTORY OF EXPLORATION AND DEVELOPMENT

The occurrence is located approximately 600 m south of Wabishkok Lake, and 250 m northeast of a small unnamed lake. It is 2.65 km east-southeast of Bluenose Lake, and 3.7 km northeast of the east end of Tartan Lake.

Oz 333 (P 82600) was staked in 1960, and cancelled in 1963.

In 1973, Hudson Bay Exploration and Development Company Limited (H.B.E.D.) did an airborne EM survey over the area under Airborne Permit No. 109 (Non-confidential Assessment File No. 91700). Granges Exploration AB followed with an airborne EM and MAG survey in 1974 under Airborne Permit No. 120 (Non-confidential Assessment File No. 92125).

In 1977, CB 6014, area 259 ha, was staked for H.B.E.D. by Neal Thruber (assisted by H. Guymer and J. Niedzielski). H.B.E.D. did an Apex Maxmin II horizontal loop EM survey in 1979. A second Maxmin II survey was done in 1984 (Non-confidential Assessment File Nos. 92673, 92675). Conductors were checked by drilling. Visible chalcopyrite and sphalerite were reported in trace amounts in two holes, Gun-35 and Gun-36, that had been drilled in 1985 to depths of 86 m and 83 m, respectively (Non-confidential Assessment File No. 92673).

In 1986, CB 6014 was restaked as Gun 4905 (P 4905E), area 128 ha, for H.B.E.D. by E. Bjornson (assisted by Engi Bjornson). In 1988, all interest in the claim was transferred to Mingold Resources Inc. (a company owned jointly by Inspiration Resources and Minorco Canada Limited).

Associated minerals or products of value

REFERENCES

Bateman, J.D. and Harrison, J.M., 1944, Mikanagan Lake, Manitoba; Geological Survey of Canada, Paper 44-22, 6p.

Bateman, J.D. and Harrison, J.M., 1945, Mikanagan Lake (Marginal Notes); Geological Survey of Canada, Map 832A.

Gale, G.H. and Eccles, D.R., 1988, Mineral deposits and occurrences in the Flin Flon area NTS 63K/13: Part III, Weasel Bay area (63K/13NW) and Defender Lake area (63K/13NE); Manitoba Energy and Mines, Geological Services, Mineral Deposit Series, Report No. 3, 46p.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 47.

Manitoba Mines Branch:
a Non-confidential Assessment Files; File Nos. 91700, 92125, +92673, 92675.

MAP REFERENCES

Map 63K/13, Flin Flon, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa (1981).

Map 2454G, Flin Flon, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 63K/13g, h, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 348G, C 40 089G, Flin Flon, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000; Province of Manitoba and Geological Survey of Canada (1983).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000; Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

#Map (EM Survey, Gun 17 Grid, East Part), Scale 1:4800; in Non-confidential Assessment File No. 92673, Manitoba Mines Branch.

Maps OF87-11-5A, OF87-11-5B, Flin Flon, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 44-22A, Mikanagan Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Bateman and Harrison (1944), Geological Survey of Canada.

MAP REFERENCES cont'd

Map 832A, Mikanagan Lake, (Geology), Scale 1:63 360 - Accompanying Marginal Notes by Bateman and Harrison (1945), Geological Survey of Canada.

*Map MDS Map No. 3, Weasel Bay (63K/13NW) and Defender Lake (63K/13NE), (Geology), Scale 1:50 000 - Accompanying Report by Gale and Eccles (1988), Manitoba Energy and Mines.

Claim Map Series 63K/13 NE, Scale 1:31 680, circa 1985, Mining Recording, Manitoba Mines Branch.

REMARKS

1. Traces of chalcopyrite and sphalerite were also reported from a hole (Gun-34) drilled 5.4 km west-northwest at Bluenose Lake (Non-confidential Assessment File No. 92673). Pyrrhotite, and minor Cu, Zn were reported 600 m south of Bluenose Lake (Non-confidential Assessment File No. 92169; Location #64, Gale and Eccles, 1988, p. 6).

Comp./Rev.	PA
By Date	12-88

PRODUCT Gold **N.T.S. AREA 63 K/14 NE** **REF. AU 1**

NAME OF PROPERTY
Fay Lake

OWNER OR OPERATOR AND ADDRESS
1990-

Chi 28 (P 3240E):
A.L. Parres Ltd.
P.O. Box 577
Flin Flon, Manitoba
R8A 1N4

Hugo (P 5676E):
Peter Dunlop
201-2639 Portage Ave.
Winnipeg, Manitoba
R3J 0P7

OBJECT LOCATED occurrence **MINING DIVISION** The Pas

Lat. 54° 58.6' Long. 101° 05.3' UNCERTAINTY: 200 m

Sec. Tp. 69 R. 24 WPM

DESCRIPTION OF DEPOSIT

The property is underlain by banded hornblende plagioclase gneiss, probably derived from Amisk Group basalt and andesite flows, and "rhyolite porpyhry". The occurrence is located in the Flin Flon-Snow Lake greenstone belt within 3 km of its northern boundary with the Kisseynew gneiss belt. The occurrence consists of gold-bearing quartz lenses, pods and veins that occur in shear zones within "gneiss". The quartz veins are up to 0.6 m (2 ft) wide, have a known strike length of 31 m (100 ft) and consist of fine to medium-grained white to grey quartz that in places contains up to 3% combined pyrite, arsenopyrite, galena and chalcopyrite. The wall rock carries pyrite, arsenopyrite and gold; grab samples were reported by the owners to assay 7.89 g/t (0.23 oz/ton) gold (McGlynn, 1959).

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located at the east end of Fay Lake along the railway and just north of mile twenty-nine.

B.C. Copper 16 and Metal 1 were first recorded around 1930. J.F. Wright visited the area in August 1930. G.M. Brownell examined the area in May 1931 (Manitoba Mines Branch, Unpublished Information Files, 63K/14).

The property was staked in 1947, as the Rad 1 (P 16513) by Hugo Palmgren. Geophysical work was done in 1952. The claim was cancelled in 1965.

William J. Lavoie recorded the Salm 2 (P 9296) over the deposit in 1968. The claim was cancelled in 1970.

In April 1983 Bruce Murray staked Fay 1 (W 47565) over the property and then transferred ownership to Alberta Ltd. who negotiated an option agreement with Catear Resources Ltd. Catear carried out prospecting and a geochemical survey in 1984 that outlined "spotty weakly to strongly anomalous enrichments of gold and arsenic" (Non-confidential Assessment File No. 92651). Three trenches were examined by the Manitoba Government that year (Parberry and Gale, 1984). The claim lapsed in June 1986.

Associated minerals or products of value

NAME OF PROPERTY Fay Lake **N.T.S. AREA** 63 K/14 NE **FILE NO.** 757 **REF.** AU 1

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

In July 1986 Peter Dunlop staked Hugo (P 5676E) over the property. Also in 1986, Chi 28 (P 3240E) was staked by Nor-Acme Gold Mines Limited around the Hugo claim. Chi 28 was transferred to Esso Resources Canada Limited in 1987, to Homestake Mining (Canada) Limited in 1989 and finally to A.L. Parres Ltd. in 1990.

REFERENCES

Bailes, A.H., 1971, Preliminary compilation of the geology of the Snow Lake - Flin Flon - Sherridon area; Manitoba Department of Mines and Natural Resources, Mines Branch, Geological Paper 1/71, 27 p.

Davies, J.F., Bannatyne, B.B., Barry, G.S., and McCabe, H.R., 1962, Geology and mineral resources of Manitoba; Manitoba Mines and Natural Resources, Mines Branch, p. 64-78.

Froese, E., 1984, Geology of the Weldon Bay - Fay Lake area, Manitoba; in Current Research, Part B, Geological Survey of Canada, Paper 84-1B, p. 355-358.

Harrison, J.M., 1951, Possible major structural control of ore deposits, Flin Flon - Snow Lake mineral belt, Manitoba; in Transactions of the Canadian Institute of Mining and Metallurgy, v. 54, p. 4-8.

Kalliokoski, J., 1953, Interpretations of the structural geology of the Sherridon - Flin Flon region, Manitoba; Geological Survey of Canada, Bulletin No. 25, 18p.

Manitoba Mines Branch:
a) Non-confidential Assessment Files; File No. 92651.
b) Unpublished Information Files; 63K/14.

McGlynn, J.C., 1955, Heming Lake and Elbow Lake, Manitoba; Geological Survey of Canada, Paper 54-14, p. 12.

McGlynn, J.C., 1959, Elbow-Heming Lakes area, Manitoba; Geological Survey of Canada, Memoir No. 305, p. 66.

Parberry, D. and Gale, G.H., 1984, Mineral deposit investigations in the Flin Flon area; Manitoba Energy and Mines, Mineral Resources, Report of Field Activities, 1984, p. 60, 65.

Stockwell, C.H., 1944, The Flin Flon-Sherridon-Herb Lake area, Manitoba and Saskatchewan; The Precambrian, v. 17, No. 8, p. 4-7, 13.

Wright, J.F., 1938, Geology and mineral deposits of a part of northwest Manitoba; Geological Survey of Canada, Summary Report 1930, Part C, p. 10, 19, 38-41.

MAP REFERENCES

Map 63K/14, Naosap Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa, Department of Energy, Mines and Resources (1981).

Map 2458G, Naosap Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/14g,h, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 876, Geological Survey of Canada (1981).

MAP REFERENCES cont'd

Maps C 20 344G, C 40 085G, Naosap Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

Preliminary Map 54-14A, Heming Lake (Naosap Lake, east half), Scale 1:63 360 - Accompanying Paper by McGlynn (1955), Geological Survey of Canada.

#Map 1071A, Heming Lake (Geology), 1:63 360-Accompanying Memoir by McGlynn (1959), Geological Survey of Canada.

Map, Figure 18, Flin Flon - Elbow Lake area, (Geology), Scale 1:300 000 - Accompanying Publication by Davies et al. (1962), Manitoba Mines Branch.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Preliminary Map 1977 CP-6, Naosap Lake, (Quaternary Geology), Scale 1:50 000, by V. Singhroy, Manitoba Mineral Resources Division.

Map, Flin Flon, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).

Maps, NE14/63K (Claim), 1:31 680; "Circa 1970" Claim Map Series, Mining Recording, Manitoba Mines Branch.

REMARKS

1. The deposit is situated adjacent to two magnetic "highs". The deposit is along the CNR right-of-way.
2. According to Wright (1938), "Two trenches about 500 feet (152 m) east of the railway, at a point about 3200 feet (975 m) north of mileage 28.8, expose fine-grained, jointed, and gneissic grey granite containing a number of quartz veins and small areas wherein pyrite, chalcopyrite, and galena are abundant".

Comp./Rev.	RM	DJR	PA
By Date	1-76	07-87	08-90

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO.** 758

PRODUCT Gold **N.T.S. AREA** 63 K/14 NE **REF.** AU 2

NAME OF PROPERTY
Redwin Property

OWNER OR OPERATOR AND ADDRESS
1990-A.L. Parres Ltd.
P.O. Box 577
Flin Flon, Manitoba
R8A 1N4

OBJECT LOCATED Prospect **MINING DIVISION** The Pas

Lat. 54° 57.8' Long. 101° 06.8' **UNCERTAINTY:** 200 m

Sec. Tp. 69 R. 24 WPM

DESCRIPTION OF DEPOSIT

The property is underlain by Amisk Group andesite and basalt flows, rhyolite and quartz porphyry. These rocks are intruded to the south by Post-Missi Intrusive Group hornblende-biotite quartz diorite. The northern boundary of the Flin Flon-Snow Lake greenstone belt with the Kisseynew gneiss belt is located 3 km to the north. The occurrence consists of disseminated to massive sulphide lenses and narrow veins, lenses or pods of quartz that occur in sheared or "schist" zones. Pyrite is the most abundant sulphide, however, pyrrhotite is more abundant in the massive sulphide lenses. Minor amounts of chalcopyrite are present in both the massive sulphide lenses and quartz veins. Gold occurs predominantly in the quartz veins. The sulphide lenses and quartz veins have a known strike length of 183 m (600 ft), individual sulphide zones are up to 6 m (20 ft) wide and quartz veins within the sulphide zones are up to 0.3 m (1 ft) wide and seldom more than 15 m (50 ft) long.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located at a point on the west shore of the southeast bay of Fay Lake, directly north of Racoon Lake.

The area was first staked as Copper Chief 12 around 1930. J.F. Wright visited the area in August 1930 and did some mapping. G.M. Brownell examined the area in May 1931 and noted a sulphide zone exposed in three trenches over a length of 76 m (250 ft) on the Copper Chief 11 claim (Brownell, 1931). The most easterly trench was reported to have assayed 2.5% Cu, 27.43 g/t (0.80 oz/ton) Au, 34.29 g/t (1 oz/ton) Ag and a small amount of zinc over 2.6 m (8.5 ft). The most westerly trench was sampled in February 1931 by E.L. Brown (Superintendent of the Sherritt Gordon Mine), who reported a value of $17.25 ($20.67 per oz) across a width of 1.1 m (3.5 ft); this width included a 46 cm (18") section of $30.25. About 73 m (240 ft) east of the vein sampled by Brown, free gold was noted in small chips taken from a quartz lens; samples taken by J.S. Richards returned $7.8 across 46 cm (18"), $16.80 across 69 cm (27"), and $4.80 across 46 cm (18") and resampling by Mr. Heath Hales indicated $31.60 over 69 cm (27") (Manitoba Mines Branch, Unpublished Information Files, 63K/14).

Associated minerals or products of value
Copper, zinc, nickel, silver.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Copper Chief 11, 12 were restaked under Gold Hill 1 (P 2635) and Ruby 4 (P 3443), respectively, by Alfred Redwin in 1936 and 1937. Work was reported in 1937, 1939-1941. In 1943, leases M-1217, M-1295 were granted for a period of 21 years.

In 1946 Ruby 6 (P 11692) was staked by Alfred Redwin over part of the former Copper Chief 12 claim. The claim was cancelled in 1947. The area was restaked in 1949 as Kay M.C. (20279) by Alfred Redwin. Diamond drilling was recorded in 1952 but there are no records on this work. The Kay claim was cancelled in 1959.

O.K. 7 (P 17772) was staked in 1947-48 by William Yakushavich over part of the former Copper Chief 11 claim. It was restaked as B.K. 3 (P 21278) in 1949 by Bill Kawski, and assigned to Carl Pielsticker in 1950. Work was reported on B.K. 3 in 1951. B.K.3 was restaked as Gold Hill 2 (P 25584) in 1952 by Alfred Redwin. Work was reported in 1953.

Leases M-1217 (Gold Hill 1), M-1295 (Ruby 4) were cancelled in 1963.

In 1963 Thomas J. Murray recorded the Bob 9 (P 3688A) claim and John Murray recorded the Bob 28 (P 2006A) claim over the former Kay M.C. and Ruby 4 claims (Copper Chief 12 claim). Gold Hill 1 and 2 (former Copper Chief 11) were restaked under Bob 29 (P 2005A) and Bob 11 (P 3690A) in 1963 (similar history to Bob 9, 28). An electromagnetic survey was done in 1964 by Kerr Addison Mines Limited (Non-confidential Assessment File No. 90472). The claims were transferred to T.P. O'Connor in 1967 and then to Pascar Oils Ltd. in 1968. They carried out a geophysical survey (EM?) that outlined two northwest-trending conductors. An 8-hole 1187 m (3895 ft) drill program was carried out and a massive sulphide zone(s) was intersected (Non-confidential Assessment File No. 90473). These intersections are summarized as follows:

Drill Hole (Claim)	Footage metres	Description	Assay	
			Au g/t	%Cu
1 (Bob 27)	42-60	semi-massive sulphides	tr-0.34 (0.09% Ni, 0.7% Zn)	0.1-0.18
2 (Bob 7)	180-193	semi-massive sulphides	tr-0.69 (0.08% Ni, 0.71% Zn)	0.08-0.42
3 (Bob 27)	146-149	sulphide zone	tr-0.69	0.05-0.15
4 (Bob 28)	28-44	mineralized zone	tr-6.17	tr-0.23
5 (Bob 7)	43-44	semi-massive sulphides	0.69	0.09-0.32
6 (Bob 7)	64-71	mineralized zone	tr-0.34	0.05-0.22
7 (Bob 16)	97-107	trace to semi-massive sulphides	tr-0.34	0.07-0.36
8 (Bob 16)	74-78	disseminated to semi-massive sulphides	0.34	0.04-0.45

The Bob claims were cancelled in 1971.

Albert Stoltz recorded CB 4677, CB 4678 over the property in 1972. In 1973 the claim blocks were transferred to the Hudson Bay Exploration and Development Company Limited (H.B.E.D.). Later in 1973 a horizontal loop EM-17 electromagnetic survey outlined the same northwest-trending anomaly that Pascar Oil had drilled (Non-confidential Assessment File No. 91563). H.B.E.D. drilled two holes totalling 201 m (660 ft) on the former Bob 16 claim, at the southeast end of Fay Lake. The drill core consisted of: massive andesite, dacite, chlorite schist ± biotite, talc, hornblende, pyrite, pyrrhotite; narrow quartz stringers with trace to 10% pyrite; and two intersections of massive sulphides (trace chalcopyrite) that were 0.5 m (1.6 ft) and 2.5 m (8.1 ft) wide (Non-confidential Assessment File No. 91496). Assay results were not submitted with the assessment report. The claim blocks were cancelled in 1976-1977.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

More recent claim history is as follows:

May 1980-August 1983 CB 11016 (Nupi 1), holder Granges Exploration Aktiebolag
- Granges did a horizontal loop electromagnetic survey in 1980-81 and drilled a 45 m deep hole (DDH OP-18-82) on the former Bob 28 claim in 1982. Drill core assays of 0.6% Cu, 0.2% Zn, trace Ag, 0.34 g/t (0.01 oz/ton) Au over 1.2 m at a drilled depth of 25 m and 0.32% Cu, 0.2% Zn, 3.77 g/t (0.11 oz/ton) Ag, 0.34 g/t (0.01 oz/ton) Au over 1.8 m at a drilled depth of 27 m were reported (Non-confidential Assessment File No. 92463). A drill hole (DDH OP-17-82) on the former Bob 7 claim returned drill core assays of up to 1.01% Cu, 0.3% Zn, 3.77 g/t Ag, 0.34 g/t Au over 0.8 m at a drilled depth of 23 m.

March 1984-May 1986 CB 12736 (Faye 2) holder W.B. Dunlop Ltd.
- Five trenches and a shaft were noted by Parberry and Gale (1984).

May 1986 CHI 24 (P 2994E) staked by A.L. Parres Ltd
- The Manitoba Government did geological mapping of the area at a scale of 1:10 000 (Parberry, 1986).

March 1987 transferred to Esso Resources Canada Ltd
April 1989 transferred to Homestake Mining (Canada) Limited
April 1990 transferred to A.L. Parres Ltd.

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Map 2458G, Naosap Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/14g,h, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 876, Geological Survey of Canada (1981).

Maps C 20 344G, C 40 085G, Naosap Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

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Preliminary Map 54-14A, Heming Lake (Naosap Lake, east half), Scale 1:63 360 - Accompanying Paper by McGlynn (1955), Geological Survey of Canada.

#Map 1C71A, Heming Lake (Geology), 1:63 360-Accompanying Memoir by McGlynn (1959), Geological Survey of Canada.

Map, Figure 18, Flin Flon - Elbow Lake area, (Geology), Scale 1:300 000 - Accompanying Publication by Davies et al. (1962), Manitoba Mines Branch.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Preliminary Map 1977 CP-6, Naosap Lake, (Quaternary Geology), Scale 1:50 000, by V. Singhroy, Manitoba Mineral Resources Division.

MAP REFERENCES cont'd

Map, Flin Flon, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).

Maps, NE14/63K (Claim), 1:31 680; circa 1930, 1976, Claim Map Series, Mining Recording, Manitoba Mines Branch.

REMARKS

1. The deposit is located adjacent to a magnetic "high".

2. South of this area on the Sundown Group, a pyrrhotite-pyrite body containing some chalcopyrite is exposed in three trenches, over a length of 91 m (300 ft) (Wright, 1938).

Comp./Rev.	RM	DJR	PA
By Date	1-76	07-87	08-90

PRODUCT Gold **N.T.S. AREA** 63K/14 SE **REF.** AU 3

NAME OF PROPERTY
Kay Lake

OWNER OR OPERATOR AND ADDRESS
1990-Granges Inc.
P.O. Box 849
Flin Flon, Manitoba
R8A 1N6

OBJECT LOCATED Prospect **MINING DIVISION** The Pas

Lat. 54° 45.4' Long. 101° 09.3' UNCERTAINTY: 200 m

Sec. Tp. 66 R. 25 WPM

DESCRIPTION OF DEPOSIT

The property is underlain by Amisk Group andesite and basalt flows that are intruded to the south by Post-Missi Intrusive Group granodiorite and crosscut by northeast-trending faults (Bailes, 1971; McGlynn 1959). The occurrence consists of sulphide and gold-bearing quartz veins that occur in shear zones in basic volcanic rocks. The quartz is medium to fine-grained, varies in colour from milk white to bluish grey and contains 1% pyrite, chalcopyrite and galena. The average gold content is unknown.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located about 1.2 km north of Copper Lake.

J.P. Gordon recorded the Contact Extension M.C. (29032) in 1919. Some trenching was done and good values in gold were obtained from channel samples (Wallace, 1920). The claim was transferred to the Copper Lake Mining Company, Limited (CPPG) in 1922. The CPPG took out lease #880 for twenty-one years on the property, starting in 1928. The lease was cancelled in 1949.

Jog 2 (P23525) was recorded in 1951 by Olaf Hanson as a relocation of the Contact Extension lease. In 1951, three holes totalling 107 m were drilled near the south boundary of Jog 2, on the Jog 1 claim, by Kay Lake Mines Limited and some well mineralized sections of core were reported (Non-confidential Assessment File No. 90475). In 1952 the Jog 2 was transferred to Kay Lake Mines Limited, who in 1955 optioned the property to Nic-Cop Mines Limited. Nic-Cop carried out geophysical surveys that outlined several northeast-trending conductors. An 11-hole 999 m (3276 ft) diamond drill program was carried out in 1955 and "well mineralized" and massive sulphide zones were intersected (Non-confidential Assessment File No. 90289). The claim was cancelled in 1963.

Lee M. Gordon recorded the Bog 5 (P 5473A) in 1963. In April 1965 a 2-hole 286 m (938 ft) drill program was carried out by Ryanor Mining Company Limited (Non-confidential Assessment File No. 92248). It intersected a quartz vein that assayed 4.79 g/t (0.14 oz/ton) Au over an indicated width of 3.5 m (11.6 ft). Drill core assays of up to 0.1% Ni, 0.3% Cu and 20.57 g/t (0.6 oz/ton) Ag were reported. The claim was transferred to John Murray in 1970. In 1971 Hudson Bay Exploration and Development Company Limited did a turam EM survey and drilled 6 holes totalling 821 m (2695 ft) (Non-confidential Assessment File No. 92242). In 1973 an airborne EM/Mag survey was done by Sherritt Gordon Mines Limited (Non-confidential Assessment File No. 92020). The claim lapsed in July 1978.

Associated minerals or products of value
Copper, lead, silver, nickel, zinc.

NAME OF PROPERTY **FILE NO. 759**
Kay Lake **N.T.S. AREA 63K/14 SE** **REF. AU 3**

HISTORY OF EXPLORATION AND DEVELOPMENT

In August 1979, CB 11520 (Brunne 6) was staked by Kerr Addison Mines Ltd., which carried out linecutting, geophysical surveys (I.P.), geochemical surveys, prospecting and diamond drilling in 1981. The property was transferred to W. Bruce Dunlop Ltd. (NPL) in February 1983 . Parberry and Gale (1984) examined 14 trenches in the area and noted quartz veins with trace pyrite in mafic volcanic rocks and gabbro. In November 1987 the claim was transferred to Granges Exploration Ltd., which was exploring this area in joint venture with Mid-North Resources Limited. In 1989, M.I.M. Holdings Ltd. of Australia obtained a 33% equity holding in Granges Exploration Ltd., which was then renamed Granges Inc..

REFERENCES

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Manitoba Mines Branch:
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b) Annual Report on Mines and Minerals; 25th-p. 73; 26th-p. 71.

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Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

MAP REFERENCES cont'd

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/14a,b, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 876, Geological Survey of Canada (1981).

Maps C 20 344G, C 40 085G, Naosap Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

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Preliminary Map 54-14A, Heming Lake (Naosap Lake, east half), Scale 1:63 360 - Accompanying Paper by McGlynn (1955), Geological Survey of Canada.

#Map 1071A, Heming Lake (Geology), 1:63 360-Accompanying Memoir by McGlynn (1959), Geological Survey of Canada.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Preliminary Map 1977 CP-6, Naosap Lake, (Quaternary Geology), Scale 1:50 000, by V. Singhroy, Manitoba Mineral Resources Division.

Map, Flin Flon, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).

Maps, SE14/63K (Claim), 1:31 680; "Circa 1976" Claim Map Series, Mining Recording, Manitoba Mines Branch.

REMARKS

1. The deposit is located between two magnetic "highs".
2. Coarse gold was panned from the Red Rose claim, located at the north end of Copper Lake (Wallace, 1919, 1920). Gold was reported from the Jameson claim, just west of Red Rose (Hage, 1944). Gold was also reported 1.5 km northeast, on the Blue Bird claims (see 63K/14 AU 4).

Comp./Rev.	RM	DJR	PA
By Date	1-76	07-87	08-90

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO.** 1024

PRODUCT Gold **N.T.S. AREA** 63K/14 SE **REF.** AU 4

NAME OF PROPERTY
Blue Bird

OWNER OR OPERATOR AND ADDRESS
1990-Granges Inc.
P.O. Box 849
Flin Flon, Manitoba
R8A 1N6

OBJECT LOCATED Centre of Blue Bird **MINING DIVISION** The Pas

Lat. 54° 46.1' Long. 101° 08.45' **UNCERTAINTY:** 500 m

Sec. Tp. 66, 67 R. 25 WPM

DESCRIPTION OF DEPOSIT

The property is underlain by Amisk Group andesite and basalt flows that are intruded by Post-Missi Intrusive Group granodiorite and quartz diorite and crosscut by northeast-trending faults (Bailes, 1971; McGlynn, 1959). The deposit consists of a quartz vein that has been indicated by drilling to be at least 213 m (700 ft) long and 5 m (17 ft) wide. The shear strikes at 036° and dips 80-85° W (Manitoba Mines Branch, Unpublished Information File, 63K/10 NW). The vein carries coarse-grained galena, pyrite and a little chalcopyrite (Wallace, 1920) and some free gold. Pyrite, galena, pyrrhotite, chalcopyrite, marcasite, magnetite and limonite were identified in thin section (Mining Engineering File, Brunne & Copper Lake Telluride Mines Limited). Small amounts of molybdenite were noted in a pink porphyry dyke, parallel to the hanging wall of the vein.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located 2 km north-northeast of the north end of Copper Lake and 1.3 km south of Peterson Lake.

The area was first staked in 1919 as Blue Bird (29013) by K.J. Pedersen and as Blue Bird Fr. (29188) by J.P. Gordon who transferred the claim to K.J. Pedersen soon after. The Blue Bird claims were transferred to J.A. Mathieu of Fort Frances, Ontario that year. Wallace (1920) reported that some trenching had been done on a quartz vein. One cross-trench exposed 5.5 m (18 ft) of quartz with some greenstone in it. Work was reported on the claims in 1920-22, 1924-26. In 1928, Blue Bird (29013) and Blue Bird Fr. (29188) were leased under 21 year lease Nos. 922, 920, respectively.

In 1938 Brunne & Copper Lake Telluride Mines Limited carried out exploration work. Extensive trenching and test-pitting were done along a vein length of 122 m (400 ft). One test pit was 2.3 m by 2.9 m (7.5 ft by 9.5 ft) by 7.9 m (26 ft) deep. Two other pits were of similar depth. Three channel samples taken from one of the pits at a depth of 7.3 m (24 ft) returned $13.30, $16.80, and $14 per ton in gold with silver values running 80.23 g/tonne, 104.91 g/t, and 220.79 g/t (2.34 oz/ton, 3.06 oz/ton, and 6.44 oz/ton), respectively. Total width of vein material at this point was 6 m (20 ft). The company was considering sinking a shaft in one of the pits.

Associated minerals or products of value
Copper, lead, silver, zinc.

1973 '0'

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

On March 20, 1939, a 22.68 kg (50 lb) sample of gold ore was submitted by A.L. Stewart (Brunne & Copper Telluride Mines Limited) to the Bureau of Mines in Ottawa for analysis. The sample was reported to assay 20.2 g/t (0.59 oz/ton) Au, 82.9 g/t (2.42 oz/ton) Ag, 1.3% Cu, 3.16% Pb, 0.05% Zn, 4.15% Fe_2O_3, 6.9% S_2, and trace As (Mining Engineering File, Copper Lake).

On May 27, 1939, a second shipment of 92.99 kg (205 lbs) of ore was submitted to the Bureau of Mines. The ore proved amenable to cyanidation. A sample assayed 16.11 g/t (0.47 oz/ton) Au, 68.57 g/t (2.00 oz/ton) Ag, 0.15% Cu, 2.20% Pb, 3.77% Fe_2O_3, trace Te, 2.47% S_2, nil Zn and As. By flotation, a concentrate was obtained which assayed 231.77 g/t (6.76 oz/ton) Au, 1023.1 g/t (29.84 oz/ton) Ag, and 30.02% Pb (a recovery of 92.4%, 90.0%, and 98.3%, respectively). The flotation tailing assayed 0.86 g/t (0.025 oz/ton) Au, 6.17 g/t (0.18 oz/ton) Ag (Mining Engineering File, Brunne & Copper Telluride Mines Limited).

Preliminary drilling was reported to have been done in May 1939. Results indicated a vein of 213 m (700 ft) that is open at both ends, and that is 4 m (14 ft) wide on the southwest and 5 m (17 ft) wide on the northeast end. Further drilling was planned.

The leases were transferred to Brunne & Copper Telluride Mines Limited in 1945. They were cancelled in 1950.

In 1951, Jog 6, 7 (P 23529, 30) were recorded by Olaf Hanson. In 1952 the claims were transferred to Kay Lake Mines Limited. Work was reported to have been done that year. The claims were transferred to Nic-Cop Mines Limited in 1954.

In 1957 the area was restaked by Peter Stewart as Lou 2, 4 (P 68966, 68). Work was reported in 1959.

Lee M. Gordon recorded Bog 1, 2 (P 99765, 66) in 1962. Bog Nos. 1-5 were grouped in 1963. Work was carried out on the claim group in 1963-1964. In 1965 an option agreement was recorded between Lee M. Gordon and W.B. Dunlop. Bog Nos. 1-25 were grouped that year. The option agreement was assigned back to Lee M. Gordon in 1966. Work was reported on the Bog claims from 1965 to 1967. In 1968, Bog 1 to 21 were grouped with Amer 1 to 3 (see 63K/11 Au 10) and work was reported on the claim group in 1968-1970. Bog 1, 2 were transferred to John Murray in 1970. An option agreement was signed with Hudson Bay Exploration and Development Company Limited (H.B.E.D.) that year. A turam EM survey was done by H.B.E.D. in 1971 and one hole was drilled on a claim (Bog 3) to the south (Non-confidential Assessment File No. 92242). H.B.E.D. abandoned its option in 1972. An airborne EM/Mag survey was done by Sherritt Gordon Mines Limited in 1973 (Non-confidential Assessment File No. 92020). Diamond drilling was reported on the claim grouping in 1972-1974. The claims were cancelled in 1976.

In 1979, CB 10471 (Brunne 9) was recorded by Kerr Addison Mines Limited, which carried out geophysical surveys, geochemical surveys, prospecting, mapping and diamond drilling in 1981. The property was transferred to W. Bruce Dunlop Limited (N.P.L.) in 1983.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

In 1987 the claim block was transferred to Granges Exploration Ltd., which was exploring the area in joint venture with Mid-North Resources Limited. Grab samples taken from the showing were reported to have assayed 11.66 g/t and 20.23 g/t (0.34 and 0.59 oz/ton) Au (Manitoba Mines Branch, Corporation File, Mid-North Resources Limited). In 1989, geophysical surveys, geochemical surveys, prospecting, mapping and diamond drilling was carried out. That year, M.I.M. Holdings Ltd. of Australia obtained a 33% equity holding in Granges Exploration Ltd., which was then renamed Granges Inc..

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Manitoba Mines Branch:
- a) Non-confidential Assessment Files; File Nos. 92020, 92242.
- b) Mining Engineering Files; Copper Lake; Brunne & Copper Lake Telluride Mines Limited.
- c) Corporation Files; Mid-North Resources Limited; Brunne & Copper Lake Telluride Mines Limited
- d) Annual Report on Mines and Minerals; 11th- p. 43; 12th-p. 33-34;
- e) Mining Recording Files (The Pas); File No. 2410 (Blue Bird); No. 2584 (Blue Bird Fr.); No. 80264 (Lou 2); No. 80266 (Lou 4); No. 109180 (Bog 1); No. 109181 (Bog 2).
- f) Unpublished Information Files; 63K/10.

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Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).
Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).
Map 63K/14a,b, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 876, Geological Survey of Canada (1981).
Maps C 20 344G, C 40 085G, Naosap Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).
Maps OF87-11-6A/OF87-11-6B, Naosap Lake area, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.
Preliminary Map 54-14A, Heming Lake (Naosap Lake, east half), Scale 1:63 360 - Accompanying Paper by McGlynn (1955), Geological Survey of Canada.
Map 1071A, Heming Lake (Geology), 1:63 360-Accompanying Memoir by McGlynn (1959), Geological Survey of Canada.
Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.
Preliminary Map 1977 CP-6, Naosap Lake, (Quaternary Geology), Scale 1:50 000, by V. Singhroy, Manitoba Mineral Resources Division.
Map, Flin Flon, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).
#Maps, SE14/63K (Claim), 1:31 680; "Circa 1947" Claim Map Series, Mining Recording, Manitoba Mines Branch.

Comp./Rev. PA
By Date 08-90

PRODUCT Copper **N.T.S. AREA** 63K/14 NE **REF.** CU 1

NAME OF PROPERTY:
Vamp Lake (Hudvam)

OWNER OR OPERATOR AND ADDRESS
1990 - Mingold Resources Inc.
P.O. Box 28,
Toronto-Dominion Centre
Toronto, Ontario
M5K 1B8

OBJECT LOCATED: Centre of Lee Gee M.C. **MINING DIVISION** The Pas

Lat. 54° 56.30' Long. 101° 10.00' UNCERTAINTY: 200 m

Sec. Tp. 69 R. 25 WPM

DESCRIPTION OF DEPOSIT

The rocks in the vicinity of the property consist of Precambrian basic lavas, altered to hornblende gneiss, and some rhyolite. Several mineralized shear zones have been located. Bands of silicification and carbonatization are pronounced, and are usually associated with massive bands of sulphides. Otherwise, the mineralization is generally of a disseminated nature. Enrichments in precious metals, copper and zinc appear to occur where secondary north-trending shearing and/or faulting are superimposed on northeast-trending fault structures.

According to Laznicka and Wadien (1985), "Three sulphide ore zones subparallel with the northeast structural grain and steeply dipping to the southeast crop out on the surface (zones 1, 2) and under the lake floor (zone 3)".

"Outcrops of rocks stratigraphically underlying and forming the hanging wall to the main ore zone are dominated by various types of mafic metavolcanic rocks, with structures that include an assemblage of vesicular flows, pillows, mafic breccias, and massive flows. In addition, a mafic fragmental unit with a chloritized matrix underlies, and is in contact with, the main zone of mineralization. Footwall units consist predominantly of intermediate to felsic pyroclastic and/or clastic rocks....In addition, some of the footwall fragmental rocks within approximately five metres of the ore zone have a higher proportion of garnets in the matrix." (Wadien and Laznicka, 1986).

Sulphide mineralization has been described as near solid to solid sulphides occurring as medium grained granular pyrite aggregates with minor chalcopyrite or sphalerite and quartz; and as pyrrhotite-rich breccia ore with lesser amounts of pyrite and/or chalcopyrite (Wadien and Laznicka, 1986).

Associated minerals or products of value
gold, silver, zinc.

HISTORY OF EXPLORATION AND DEVELOPMENT

The property is located on the large island in the north part of Vamp Lake. Flin Flon is 46.5 km southwest.

The area was first staked by E.R. Patton as the AC group of six claims. A channel sample taken over a width of 2.4 m (8 ft) was reported to have returned 3% Cu and high gold values, indicating values of more than 16$/ton (Free Press, November 30, 1928 and December 8, 1928 in Manitoba Mines Branch, Unpublished Information Files).

On February 8, 1929, The Nipissing Mining Company Limited optioned the property from E.R. Patton (Tribune, February 12 and September 24, 1929; Free Press, April 13, 1929). A small showing of sulphides about 1.5 m (5 ft) wide and averaging 3.2% Cu and $3.50 gold, was to be examined. The surface showing was in a belt of highly altered greenstones (less than 244 m wide) and was exposed by trenching for a length of 24.4 m (80 ft) and a width of 1.8 m (6 ft).

Diamond drilling found that the vein pinched out less than 31 m (100 ft) from shore; work discontinued after 7 shallow drill holes totalling 487 m (1598 ft) were drilled (Manitoba Mines Branch, Mining Engineering File, Nipissing Mining Company). It was later reported that "Shallow drilling carried out about 20 years ago indicated the possibility of a zone 345 ft (105 m) in length with a width of 3.78 ft (1.2 m) averaging 2.16% in copper, 1.25% in zinc, 0.134 oz (4.6 g/t) gold, and 0.28 oz (9.6 g/t) silver, according to P.A. Chubb, consulting geologist." (Northern Miner, March 24, 1949, in Manitoba Mines Branch, Corporation File, Lee Gordon Mines Limited).

Fleet G. Whitaker recorded the Duke M.C. (P 5626) in 1940. The claim was cancelled in 1948.

Lee M. Gordon recorded the Lee Gee Group (P 17763) of claims in 1947. Trenching and test-pitting were carried out in 1949, followed by a nine hole diamond drilling program by Lee Gordon Mines Limited. A February 1950 brochure (Lee Gordon Mines Limited, Corporation File) reported the following drilling results:

Drill hole	Core width	Au g/t (oz/ton)	Ag g/t (oz/ton)	%Cu	%Zn
1	3.5 m (11.5 ft)	3.98 (0.116)	52.1 (1.52)	5.57	1.80
2	2.4 m (8.0 ft)	2.39 (0.07)	19.5 (0.57)	1.66	1.74
4	0.6 m (2.0 ft)	8.23 (0.24)		0.95	3.44
6	4.3 m (14.0 ft)	0.93 (0.027)		0.10	1.72
6	1.2 m (4.0 ft)	1.65 (0.048)		0.52	1.62
8	0.3 m (1.0 ft)	0.34 (0.01)		1.41	1.35
8	0.9 m (3.1 ft)	2.06 (0.06)		3.24	1.32
9	9.7 m (31.9 ft)	1.65 (0.048)		2.56	2.80

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

(1949 Northern Miner newspaper articles, April 7, May 12, August 11, reported slightly different results:

Drill hole	Core width	Au g/t (oz/ton)	Ag g/t (oz/ton)	%Cu	%Zn
1	5.9 m (19.5 ft)	2.61 (0.076)		3.48	
2	2.1 m (7.0 ft)	2.74 (0.08)	22.3 (0.65)	1.9	1.99
6	4.3 m (14.0 ft)	0.93 (0.027)		0.1	1.72
6	1.7 m (5.5 ft)	1.37 (0.04)		0.4	1.27).

The drilling indicated three mineralized zones with copper, gold and zinc. The 'A' zone was reported to be 101 m (330 ft) long, averaging 4.46 g/t (0.13 oz/ton) Au, 2.67% Cu and 1.6% Zn over 1.4 m (4.7 ft) (Northern Miner, August 11, 1949). Another article reported the 'A' zone to be 49 m (162 ft) long, averaging 3.43 g/t (0.1 oz/ton) Au, 36.3 g/t (1.06 oz/ton) Ag, 4.16% Cu, 1.75% Zn over 2.2 m (7.3 ft) (Northern Miner, October 20, 1949).

A 22 hole, 1361 m (4466 ft) diamond drilling program was started in December 1949 to explore the drill hole 9 area. Canus Petroleum Corporation took control of Lee Gordon Mines Limited during 1949 and continued diamond drilling. In 1950 the claims were transferred to C. Pielsticker (a principal of Canus Petroleum Corporation). The 1950 diamond drilling apparently indicated a zone approximately 183 m (600 ft) long containing two sulphide lenses (Canus Petroleum Corporation, Corporation File).

Further surface work and geophysical surveying was carried out in 1951. Mining Geophysics Corp. carried out electromagnetic and magnetic surveys in January 1951 (Northern Miner, January 11, 1951). According to Franc. Joubin (consulting geologist), "The structure of the sulphide-bearing zones...appears to be related to folds and flextures in banded andesite and rhyolite lavas". The magnetometer survey found ten anomalies. An EM survey was carried out by McPhar Geophysics Ltd. (Northern Miner, April 12, 1951). Geophysical work apparently indicated a structure more than 1829 m (6000 ft) long, mostly under the lake (Canus Petroleum Corporation, Corporation File).

Grab samples from a new showing on the mainland, 76 m (250 ft) south of EM anomalies and 305 m (1000 ft) west-southwest of the island, returned the following assays:

	Au g/t (oz/ton)	Ag g/t (oz/ton)	%Cu	%Zn
1.	2.06 (0.06)	46.63 (1.36)	14.86	3.02
2.	2.74 (0.08)	29.83 (0.87)	1.32	0.85
3.	1.71 (0.05)	28.79 (0.84)	1.96	1.52
4.	2.06 (0.06)	34.97 (1.02)	3.49	3.42

(Source: Northern Miner, June 7 1951).

This showing was drilled by C. Pielsticker in early 1952.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Up until 1953, approximately 2438 m (8000 ft) of diamond drilling had been reported (Canadian Mines Handbook, 1953, p. 116). The property was idle until 1957 when the claims were transferred to Lee Gordon Mines Limited, which entered into an option agreement with The Mining Corporation of Canada, Limited. The Mining Corporation of Canada, Limited carried out some diamond drilling in 1957, before abandoning its option in 1958. The property remained idle from 1958 to 1962.

In 1963 Lee Gordon Mines Limited resumed exploration with geophysical work and diamond drilling. A nine-hole diamond drilling program carried out in the spring of 1963 confirmed the presence of four sulphide deposits over a strike length of 3.6 km (2.25 mi) (Northern Miner, December 26, 1963).

The following estimates were reported by Scope Mining and Exploration Consultants (Northern Miner, February 28, 1963):

Zone 1: 40 m (130 ft) long, average width 2.3 m (7.5 ft), average grade 3.77 g/t (0.11 oz/ton) Au, 20.91 g/t (0.61 oz/ton) Ag, 3.39% Cu, 1.5% Zn
Zone 2 (46 m (150 ft) southwest of zone 1):
    24 m (77 ft) long, average width 6.8 m (22.5 ft), average grade 1.37 g/t (0.04 oz/ton) Au, 6.17 g/t (0.18 oz/ton) Ag, 1.36% Cu, 1.3% Zn
Zone 3 (366 m (1200 ft) southwest of zone 2):
    107 m (350 ft) long, average width 5.7 m (18.7 ft), average grade 4.11 g/t (0.12 oz/ton) Au, 15.08 g/t (0.44 oz/ton) Ag, 1.30% Cu, 1.77% Zn (note: 46 m (150 ft) south of this zone, three holes returned 34.3-223 g/t (1-6.5 oz/ton) Ag; Hole 37 cut 3.6 m (12 ft) of 236.9 g/t (6.91 oz/ton) Ag)
Zone 4 (274 m (900 ft) southwest of zone 3):
    213 m (700 ft) strike length drilled; assays were under 0.5% Cu.

(The following results, slightly different from the above, were reported in the Northern Miner, January 19, 1964:
No. 1 shoot:
    40 m (130 ft) long, average grade 6.17 g/t (0.18 oz/ton) Au, 40.5 g/t (1.18 oz/ton) Ag, 4.59% Cu, 1.62% Zn
No. 1A (west of No. 1):
    18 m (60 ft) long, average width 4 m (13.6 ft), average grade 1.03 g/t (0.03 oz/ton) Au, 3.43 g/t (0.1 oz/ton) Ag, 1.68% Cu, 2.02% Zn
Third shoot farther west:
    111 m (365 ft) long, average width 5 m (16.3 ft), average grade 4.11 g/t (0.12 oz/ton) Au, 16.79 g/t (0.49 oz/ton) Ag, 1.35% Cu, 1.9% Zn).

In December 1963, Lee Gordon Mines Limited (partly owned by Nu-World Uranium Mines) signed a 2 year option agreement with Marcon Mines Limited. Up until 1964, a total of 7193 m (23 600 ft) of diamond drilling had been done by the previous owners. Eight zones of mineralization were known: No. 1 and 2 were originally located on surface; No. 3 was found under Vamp Lake by an EM survey; No. 4, 'Silver', and 'Line 40E' were exposed on surface subsequent to geophysical work; the 'C' and 'Fold' zones were found by geological work (Marcon Mines Limited, Report to Shareholders, May 28, 1964).

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

From January to April 1964, Marcon Mines Limited drilled 24 holes totalling 2990 m (9810 ft) on Zones 1 and 2. A summary of the drilling results is shown in Tables 1-3. Possible ore indicated in Zones 1, 2, 3 were reported by Marcon Mines Limited as follows:

Zone	Indicated tonnage tonnes (tons)	Au g/t (oz/ton)	Ag g/t (oz/ton)	%Cu	%Zn
1.	286 750 (316 000)	3.12 (0.091)	18.17 (0.530)	1.180	1.120
2.	105 260 (116 000)	1.06 (0.031)	5.04 (0.147)	0.985	1.798
3.	196 000 (216 000)	3.19 (0.093)	16.87 (0.492)	1.190	1.723
Total	588 020 (648 000)	2.78 (0.081)	15.09 (0.440)	1.150	1.440

(Source: Marcon Mines Limited, Report to Shareholders, May 28, 1964).

In the summer of 1964 Marcon Mines Limited drilled 8 holes totalling 1284 m (4211 ft) on the No. 3 zone increasing the tonnage from 196 000 tonnes (216 000 tons) to 229 580 tonnes (253 000 tons) averaging 3.43 g/t (0.10 oz/ton) Au, 17.14 g/t (0.50 oz/ton) Ag, 1.15% Cu, 1.67% Zn (Northern Miner, September 17, 1964). Hole 133 was drilled to test the No. 1 zone at depth, and intersected 0.9 m (3.2 ft) of 4.11 g/t (0.12 oz/ton) Au, 6.86 g/t (0.20 oz/ton) Ag, 0.65% Cu, 1.58% Zn at a drilled depth of 404 m (1324 ft); this section was followed by 4.5 m (14.8 ft) of rhyolite tuffs (not sampled) and then 3.6 m (12 ft) of low values including 0.6 m (2 ft) grading 0.25% Cu, 1.94% Zn, 0.69 g/t (0.02 oz/ton) Au, and 4.11 g/t (0.12 oz/ton) Ag. Holes were also drilled to test the extension of the No. 2 zone.

The Northern Miner (November 19, 1964) reported the following estimates:
Zone No. 1:
214 970 tonnes (236 900 tons) averaging 0.94% Cu, 1.31% Zn
Zone No. 2 (on the Vam 1 (P 96013) claim):
13 975 tonnes (15 400 tons) grading 1.68% Cu, 2.02% Zn
Zone No. 3 (on Tex (P 1668), 350 m southwest):
224 680 tonnes (247 600 tons) grading 1.2% Cu, 1.91% Zn.
Zone No. 4 (about 1.1 km southwest):
a surface pit sample returned 2% Cu, 0.9% Zn over 4.6 m (15 ft), including a 3 m (10 ft) section of 6.17 g/t (0.18 oz/ton) Au, and 126.86 g/t (3.7 oz/ton) Ag; a chip sample along the footwall of this zone assayed 5.48% Cu and 2.65% Zn. Two holes were to be drilled on this zone, 229 m (750 ft) southwest of the west end of Vamp Lake (Northern Miner, January 14, 1965).

From January 1964 to June 1965 Marcon Mining Limited had done a total of 6395 m (20 981 ft) of drilling. To date (June 1965), a total of 13 588 m (44 581 ft) of diamond drilling has been done indicating reserves of 453 720 tonnes (500 000 tons) averaging 1.65% Zn, 1.10% Cu, 2.78 g/t (0.081 oz/ton) Au, and 16.46 g/t (0.48 oz/ton) Ag in three mineralized zones (Canadian Mines Handbook, 1965).

TABLE 1

SUMMARY OF THE 17 HOLES DRILLED IN 1964 BY MARCON ACROSS ZONE NO. 1 FOR A NORTHEAST-SOUTHWEST DISTANCE OF 600 FEET, FOLLOWS:

Hole No.	Dip	Core Width In Feet	Elev. Below Vamp Lake	Au oz/ton	Ag oz/ton	Cu %	Zn %	Remarks
101	—45°							Low sulphides both shears
102	—45°	6.5	55	0.020	0.610	0.67	1.88	S. shear
103	—45°	4.0	120	0.020	0.260	0.25	0.39	N. shear
104	—45°	11.5	32	0.850—	1.800			Not assayed for Cu and Zn
		14.0	62	0.175	0.670	2.390	2.700	S. shear
107	—45°	5.5	170	0.070	0.170	0.730	0.895	S. shear
		15.1	205	0.047	0.366	1.064	0.446	N. shear
108	—45°	13.6	170	0.305	0.677	0.986	0.857	S. shear
109	—45°	7.1	160	0.040	0.764	2.256	2.729	S. shear
110	—45°	2.8	155	0.060	0.500	0.950	3.470	S. shear
111	—45°	26.5	270	0.048	0.414	0.428	0.556	Near junction
112	—55°	19.3	365	0.064	0.483	0.697	0.630	Near junction
113	—55°	15.8	285	0.060	0.555	0.672	0.569	S. shear
119	—70°	41.5	260	0.117	0.677	1.564	1.774	Junction
120	—70°	20.0	385	0.055	0.460	0.810	1.270	S. shear
121	—75°	17.6	335	0.110	0.510	0.727	1.510	S. shear
122	—75°	14.1	485	0.080	0.333	0.590	0.890	S. shear
123	—75°	24.1	465	0.077	0.191	0.472	0.674	S. shear
124	[illegible]5°	[illegible]	6[illegible]	[illegible].060	[illegible]00	[illegible]	0.[illegible]	S. shear

TABLE 2

SUMMARY OF 5 HOLES DRILLED IN 1964 BY MARCON ACROSS ZONE NO. 2:

Hole No.	Dip	Core Width	Elev. Below Vamp Lake	Au oz./ton	Ag oz./ton	Cu %	Zn %
114	—45°	13.5	265	0.033	0.210	0.273	3.343
115	—45°	12.4	165	0.080	0.813	0.847	2.427
106	—45°	6.7	240	0.085	0.520	0.742	0.732
117	—60°	8.7	280	0.040	0.380	0.445	2.440
105	—45°	4.8	80	0.020	0.350	0.130	0.320

TABLE 3

SUMMARY OF 5 HOLES DRILLED BY EARLIER OPERATORS ACROSS ZONE NO. 3:

Hole No.	Core Width	True Width	Assays			
			Au/oz.	Ag/oz.	Cu %	Zn %
58	13.9	13.9	.110	.44	1.60	—
42	33.7	33.7	.035	.28	1.01	2.43
68	28.0	28.0	.060	.85	1.72	.79
39	43.0	43.0	.086	.41	1.07	2.39
40	17.0	17.0	.260	.55	.58	1.49

Source: Marcon Mines Limited,
Report to Shareholders, May 28, 1964

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

In 1965 the property was transferred to John L. Noble (former secretary-treasurer of Marcon Mines Limited and recorded owner and trustee of Vamp lake Mines Limited). At that time, finances were being sought for the sinking of a 160 m (525 ft) shaft with levels at 61, 107, and 152 m (200, 350, and 500 ft) (Canadian Mines Handbook, 1965). In 1966 Marcon Mines Limited changed its name to Conmar Explorations Ltd.. In 1969 an option agreement was recorded between Vamp Lake Mines Limited (70% owned by Conmar) and Hudson Bay Exploration and Development Company Limited (H.B.E.D.). The option was extended in 1971 for another year. H.B.E.D. carried out diamond drilling work in 1969-1972.

Later, in 1973, all rights were transferred first to H.B.E.D. and then to Hudvam Mines Ltd.. Hudvam, at the time, was capitalized at 3 million shares, of which 800 000 were held by H.B.E.D. and 200 000 by Vamp Lake Mines Limited. Reserves at that time were given as 364 065 tonnes (401 200 tons) in two zones, grading 4.11 g/t (0.12 oz/ton) Au, 14.74 g/t (0.43 oz/ton) Ag, 1.5% Cu and 1.7% Zn (Northern Miner, January 25, 1973).

Reported reserve figures have varied: 360 000 tonnes (1.5% Cu, 1.7% Zn) (Hosain, 1980); 421 840 tonnes (1.66% Cu, 2.2% Zn) (Esposito, 1986); 387 840 tonnes (1.23% Cu, 1.5% Zn, 4.35 g/t (0.127 oz/ton) Au, 15.43 g/t (0.45 oz/ton) Ag) (Canadian Mines Handbook, 1981-82); 432 700 tonnes (1.2% Cu, 1.4% Zn) (Walford and Franklin, 1982); 421 000 tonnes (1.7% Cu, 2.2% Zn, 4.29 g/t (0.125 oz/ton) Au, 14.71 g/t (0.429 oz/ton) Ag) (Bailes et al., 1987).

On July 9, 1976, Explored Area Lease No. 11 covering 728 ha was issued to Hudvam Mines Ltd. H.B.E.D. holds a 100% interest in Hudvam (Canadian Mines Handbook, 1984-85, p. 182).

On October 19, 1984 the property was transferred to Hudson Bay Mining and Smelting Co., Limited. Diamond drilling was carried out in 1984-1985. Parberry and Gale (1984) examined eight trenches in the area and noted solid pyrite and pyrrhotite in basaltic pillow lava. Laznicka and Wadien (1985) carried out detailed geological mapping (Scales 1:5000, 1:240), mapping and sampling of the ore zones, and core logging. This work was continued for three weeks during the 1986 field season.

On February 17, 1988 the property was transferred to Mingold Resources Inc. (owned by Inspiration Resources and Minorco Canada Ltd.). Golden Range Resources Inc. had signed an option to earn 100% interest in the Vamp Lake property in 1987. Mingold could earn 50.1% of Golden Range (Northern Miner, September 21, 1987). Golden Range was held 25.3% by Mingold Resources Inc., 23.7% by MVP Exploration & Co., 20.8% by Middlefield Financial, 10.7% Agassiz Resources Ltd.. A $600 000 winter drill program was to be done to increase reserves from 421 960 tonnes (465 000 tons), grading 4.69 g/t (0.137 oz/ton) Au, 14.74 g/t (0.43 oz/ton) Ag, 1.66% Cu, 2.2% Zn.

A four mile access road was completed at cost of $1.9 million partly through financing arrangements by Golden Range with MVP Exploration (1987) Ltd. Partnership (Northern Miner, January 25, 1988).

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Work planned for 1988 included a 1524 m (5000 ft) decline ramp down to the No. 3 and No. 1C zones and a $1 million 2438 m (8000 ft) diamond drill program. Reserves in No. 3 were reported at 257 890 tonnes (284 198 tons), grading 2.29 g/t (0.067 oz/ton) Au (cut), 13.7 g/t (0.40 oz/ton) Ag, 1.15% Cu, 2.3% Zn; No. 1C reserves were reported at 217 395 tonnes (239 569 tons), grading 6.86 g/t (0.20 oz/ton) Au, 19.19 g/t (0.56 oz/ton) Ag, 2.14% Cu, 2.7% Zn (Northern Miner, January 25, 1988).

The first drill hole, located at the 427 m (1400 ft) level below No. 3, intersected 12 m (38 ft) of near solid sulphide assaying 1.85 g/t (0.054 oz/ton) Au, 5.83 g/t (0.17 oz/ton) Ag, 1.25% Cu, 2.7% Zn, including 3.4 m (11 ft) of 4.66 g/t (0.136 oz/ton) Au, 8.57 g/t (0.25 oz/ton) Ag, 1.96% Cu, 2.58% Zn (Northern Miner, February 15, 1988). The mineralization is apparently similar to No. 3, which bottoms out at the 76 m (250 ft) level and contains 203 575 tonnes (224 340 tons) grading 2.36 g/t (0.069 oz/ton) Au, 17.14 g/t (0.5 oz/ton) Ag, 2.13% Cu, 2.2% Zn (Northern Miner, February 15, 1988).

Results of a six-hole diamond drill program to test reserves between the 305 m (1000 ft) and 488 m (1600 ft) levels included:
Hole 65: 12 m (38 ft) of 1.85 g/t (0.054 oz/ton) Au, 3.43 g/t (0.10 oz/ton) Ag, 1.25% Cu, 2.3% Zn
Hole 68: 4 m (13 ft) of 4.46 g/t (0.13 oz/ton) Au, 8.23 g/t (0.24 oz/ton) Ag, 0.87% Cu, 1.8% Zn
Hole 6W-1: 24 m (77 ft) of 2.67 g/t (0.078 oz/ton) Au, 6.17 g/t (0.18 oz/ton) Ag, 0.99% Cu, 2.5% Zn
(Northern Miner, March 21, 1988).

In October 1988 it was reported that Golden Range was unable to finance the decline, completing only 213 m (700 ft) of a 1524 m ramp (Northern Miner, October 3, 1988). A joint venture partner was being sought. A drill-proven, possible and probable, reserve inventory of 739 560 tonnes (815 000 tons) grading 3.98 g/t (0.116 oz/ton) Au, 13.7 g/t (0.40 oz/ton) Ag, 1.36% Cu, 1.9% Zn was reported to have been outlined (Northern Miner, October 3, 1988). Another published figure was 703 000 tonnes of probable and possible ore grading 3.74 g/t (0.109 oz/ton) Au, 12.68 g/t (0.37 oz/ton) Ag, 1.3% Cu, 1.9% Zn (Manitoba Energy and Mines, Annual Report 1988-89).

A proposal was filed by AMS of Canada Inc. to the Department of Environment for the exploration and initial development of the property. Work (proposed to start in April 1990) includes: re-opening of the access road; re-establishment of a surface camp; re-opening of the mine portal and dewatering of the ramp; extension of the exploration ramp; underground diamond drilling; extraction of a 2500 tonne ore sample; and data collection for environmental assessment of the mine operation (Winnipeg Free Press, March 10, 1990).

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#Claim Map Series 63K/14NE, Scale 1:31 680, circa 1975, Mining Recording, Manitoba Mines Branch.

REMARKS

The deposit is located under a magnetic high.

Comp./Rev.	RM	PA
By Date	01-76	04-90

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO.** 761

PRODUCT Copper **N.T.S. AREA** 63K/14 NW **REF.** CU 2

NAME OF PROPERTY:
Star 5

OWNER OR OPERATOR AND ADDRESS
1990 - Hudson Bay Exploration and
Development Company Limited
P.O. Box 1500
Flin Flon, Manitoba
R8A 1N9

OBJECT LOCATED: Prospect **MINING DIVISION** The Pas

Lat. 54° 58.50'	Long. 101° 17.70'	UNCERTAINTY: 200 m
Sec.	Tp. 69	R. 26 WPM

DESCRIPTION OF DEPOSIT

The country rock in the vicinity of the deposit consists of amphibolite, hornblende gabbro, gneisses and schists of uncertain origin. These rocks are likely cut by the eastern extension of the Weldon Fault zone. Drilling intersected hornblende gneiss, quartz-mica gneiss and greenstone gneiss.

Disseminated chalcopyrite, pyrrhotite and pyrite are associated with the quartz-mica gneiss. Some sphalerite is also present. Kalliokoski (1952) reports that the paragenesis appears to be chalcopyrite and sphalerite, followed by pyrrhotite and pyrite. This sequence is in contradiction to other gneissic deposits, such as Sherritt Gordon, where pyrrhotite is the first sulphide to be deposited. Kalliokoski maintains that the reason the sulphides are found in the greyish quartz-mica gneisses is that sulphide deposition was controlled by the brittle nature of the host rock.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located immediately south of Weldon Narrows near Fay Creek.

The deposit was first recorded as the Bar 5, but information on this claim is not available. In 1930, J.F. Wright noted massive and disseminated pyrrhotite with minor chalcopyrite and sphalerite in quartzite in several trenches (Wright, 1938).

William Kakushavech in 1944 recorded the Star 5 (P 7356) over the prospect. Diamond drilling was recorded in 1949 and 1950 but this was actually credits from a drilling program in 1948. Six holes, totalling 439 m (1440 ft) were drilled on the Star 5 and the nearby Star 8 mining claims by Sherritt Gordon Mines Limited (Non-confidential Assessment File No. 90484). Drill core assays of up to 1.59% Cu and 0.2 g/t (0.005 oz/ton) Au were reported. The claim was cancelled in 1951.

Associated minerals or products of value
gold, zinc.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Star 5 (P 25268) was staked by Gordon Rapson in 1952, and transferred to Glen Rapson later that year. In 1953 a geophysical survey and diamond drilling (one hole, 103 m deep) were recorded by Hudson Bay Exploration and Development Company Limited (H.B.E.D.) (Non-confidential Assessment File Nos. 90480, 90486). The claim was cancelled in 1956.

The Star 5 was relocated by S.W. Schiltroth in 1959 as the Vie 7 (P 77276). The claim was cancelled in 1961.

Well 2 (P2607C) was staked by Albert Baumgartner in 1966, and transferred to H.B.E.D. later that year. The claim lapsed in 1978.

The area was examined by the Manitoba Government in 1980 (see Gale, 1980). In 1982, CB 12594 (Yes 12594), area 112 ha, was staked by A. Ballantyne (assisted by J. Ballantyne) for H.B.E.D.. That year, an HLEM (Apex Maxmin II) survey was done by Ray-dor Resources Ltd. for H.B.E.D. (Non-confidential Assessment File No. 92696).

The area was restaked in 1984 as Yes 4144 (P 4144E), area 75 ha, by Ingi Bjornson for H.B.E.D. Anthophyllite-bearing rocks in the area were examined by Froese (1985).

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Claim Map Series 63K/14NW, Scale 1:31 680, circa 1976, Mining Recording, Manitoba Mines Branch.

REMARKS

1. The deposit is located under a magnetic "low".

2. Assays of up to 6000 ppm Zn and 6850 ppb Au were reported north of this area (Non-confidential Assessment File No. 92652).

Comp./Rev.	RM	PA
By Date	01-76	04-90

PRODUCT Copper **N.T.S. AREA** 63K/14 NW **REF.** CU 3

NAME OF PROPERTY:
Kay 5

OWNER OR OPERATOR AND ADDRESS
1990 - High River Gold Mines Ltd.
1660 - 999 West Hastings St
Vancouver, British Columbia
V6C 2W2

OBJECT LOCATED: Centre of Claim **MINING DIVISION** The Pas

Lat. 54° 57.80' Long. 101° 21.90' UNCERTAINTY: 500 m

Sec. Tp. 69 R. 26 WPM

DESCRIPTION OF DEPOSIT

The Precambrian country rocks consist of hornblende gabbro and a unit of biotite-plagioclase-quartz gneiss. The Weldon Bay fault cuts the area just north of the deposit.

Diamond drilling intersected hornblende metadiorite, sericite, chlorite schist and zones of white quartz.

The sulphides present are sphalerite, chalcopyrite, pyrrhotite and pyrite.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located southwest of Weldon Bay.

The prospect was recorded in 1950 by William Yakushavech as the Kay 5 (P 21916), part of the Kay group of claims. In 1951 nine holes totalling 177 m (582 ft) were drilled on Kay 5; five holes totalling 107 m (349.8 ft) were drilled on Kay 1; and two holes totalling 56 m (184 ft) were drilled on Kay 9. Assay values ranged from zero to 5.71% Cu; zero to 21.1% Zn; up to 27.79 g/t (0.84 oz/ton) Ag and 0.69 g/t (0.02 oz/ton) Au (Non-confidential Assessment File No. 90479).

More drilling was done in 1953. Five holes totalling 973 m (3192 ft) were drilled on Kay 5; five holes totalling 997 m (3270 ft) were drilled on Kay 1; and another six holes totalling 597 m (1960 ft) were drilled on other Kay claims (Non-confidential Assessment File Nc. 90486). A geophysical survey was recorded for 1953 (Non-confidential Assessment File No. 90480). The claim was cancelled in 1961.

CB 3923 was staked by G. Rapson in 1971, and restaked as CB 4744 by A.F. Olesen in 1973. The property was assigned to Hudson Bay Exploration and Development Company Limited (H.B.E.D.) soon after. The claim block lapsed in 1976. H.B.E.D. restaked the area as CB 10595 (Yes) in 1979. The area re-opened for staking in 1985.

Associated minerals or products of value
gold, zinc, silver.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

In 1987 Don 2, 3 (P 6495D, 6496D) were staked by Nor-Acme Gold Mines Limited. Nor-Acme Gold Mines Limited amalgamated with High River Resources Ltd. to form High River Gold Mines Ltd. (Inco Gold was entitled to own up to 40.1% of the new company). The change of ownership in the claim to the new company was recorded in February 1989. The claims were restaked by High River Gold Mines Ltd. in August 1989 as Nod 2, 3 (P 8097E, 8098E).

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Map, Flin Flon, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).
#Claim Map Series 63K/14NW, Scale 1:31 680, circa 1961, Mining Recording, Manitoba Mines Branch.

REMARKS

The deposit is located adjacent to a magnetic "low".

Comp./Rev.	RM	PA
By Date	01-76	08-90

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO.** 763

PRODUCT Copper **N.T.S. AREA** 63K/14 NW **REF.** CU 4

NAME OF PROPERTY:
Stan S 2

OWNER OR OPERATOR AND ADDRESS
1990 - A.L. Parres Ltd.
P.O. Box 577
Flin Flon, Manitoba
R8A 1N4

OBJECT LOCATED: Prospect **MINING DIVISION** The Pas

Lat. 54° 53.9'	Long. 101° 24.7'	UNCERTAINTY: 200 m
Sec.	Tp. 68	R. 26 WPM

DESCRIPTION OF DEPOSIT

The Precambrian country rock, as mapped by Kalliokoski (1952), consists of amphibolite derived from mafic flows and pillow lavas. Some pseudo-gabbro and pseudo-diorite is also present.

Diamond drilling intersected andesite, both chloritic and amphibolitic with quartz-carbonate stringers. Some tuffaceous and rhyolitic zones were intersected.

Sections of the drill core returned assays of up to 0.16% Cu, 0.98% Zn, and 0.34 g/t (0.01 oz/ton) Au (Non-confidential Assessment File No. 90485).

The main sulphides are pyrrhotite, pyrite, sphalerite and chalcopyrite.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located on the east side of Blueberry Lake.

M.R.C. Mitchell recorded the Stan S 2 (P 21751) claim in 1950. During the same year he transferred the claim to S.C. Simpson. The claim was allowed to lapse in 1954.

John Murray recorded Tam 6 (P 32744) in 1954. In 1955 the claim was transferred to Cove Uranium Mines Limited. A magnetometer survey was recorded that year. An EM survey was done in 1959 by Hudson Bay Mining & Smelting Company Limited (Non-confidential Assessment File No. 90397). A total of 181 m (594 ft) of diamond drilling was done on the Tam 6 in 1960 (Non-confidential Assessment File No. 90485). The claim was cancelled in 1961.

Associated minerals or products of value
gold, silver, zinc, nickel.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

In 1979 Granges Exploration Aktiebolag staked CB 10976 (Nup 8). A horizontal loop EM survey was done and one 60 m (197 ft) deep drill hole was drilled in 1979-80. The 35.3 to 35.9 m (115.8 - 118.1 ft) section of core returned an assay of 0.05 g/t Au, 5.0 g/t Ag, 0.14% Cu, 0.44% Zn, 0.07% Ni (Non-confidential part of Assessment File No. 99962). The claim block was cancelled in 1983.

In 1984 A.L. Parres Ltd. staked the area under Bou 5 (P 6554D). The claim was transferred to Esso Resources Canada Limited in 1987, to Homestake Mining (Canada) Limited in 1989, and back to A.L. Parres Ltd. in 1990.

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Manitoba Mines Branch:
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b) Corporation Files; Cove Uranium Mines Limited.

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Map, Flin Flon, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).

Claim Map Series 63K/14NW, Scale 1:31 680, circa 1961, Mining Recording, Manitoba Mines Branch.

REMARKS

1. The deposit is located between two magnetic "highs".
2. A drill hole (DDH 33), 4.4 km SW, intersected 11 m of sheared dacite with disseminated pyrrhotite and visible chalcopyrite (Non-confidential Assessment File No. 90400).

Comp./Rev.	RM	PA
By Date	02-76	08-90

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO. 764**

PRODUCT Pyrites	**N.T.S. AREA** 63K/14 NW	**REF.** PYR 1

NAME OF PROPERTY:
Leo 1

OWNER OR OPERATOR AND ADDRESS
1990 - Open

OBJECT LOCATED: Prospect **MINING DIVISION** The Pas

Lat. 54° 53.1'	Long. 101° 17.8'	UNCERTAINTY: 200 m
Sec.	Tp. 68	R. 26 WPM

DESCRIPTION OF DEPOSIT

The Precambrian country rocks consist of hornblende granodiorite, fine grained siliceous rocks that are derived from adjoining granitic rocks and amphibolite, derived from mafic lavas.

Six metres (20 ft) of massive pyrrhotite is exposed in a pit dug on the Leo 1. The massive zone is bordered by a zone of disseminated pyrrhotite. The sulphide body is enclosed by granoblastic gneisses.

Besides pyrrhotite, diamond drilling intersected pyrite, chalcopyrite, and trace sphalerite.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located at the south end of Sewap Lake.

Tom Wyskstandt recorded Leo No. 1 (P 19242) in 1948. Diamond drilling was done on the nearby Leo 3 and 4 claims in 1950 (Non-confidential Assessment File No. 90482). The claim was cancelled in 1963.

J. Jerome Studer staked Asp 19 (P 5596A) over the deposit in 1963. Later that year the claim was assigned to Hudson Bay Exploration and Development Company Limited. An EM survey and diamond drilling was done in 1964 (Non-confidential Assessment File No. 90478). Three holes, totalling 235 m (771 ft), intersected up to 31 m (102 ft) long mineralized sections with pyrrhotite, pyrite, chalcopyrite and trace sphalerite. The claim was cancelled in 1965.

An airborne EM/Mag survey was done by Sherritt Gordon Mines Ltd. in 1973 (Non-confidential Assessment File No. 92020).

The following stakings were recorded:

Year	Claim	Owner
1980-1982	CB 11058 (Jog)	James D. McNicol
1984-1986	Fay 9 (W 47680)	A.L. Parres Ltd.
-Trenches were examined by the Manitoba Government in 1984 (Parberry and Gale, 1984).		
1987-1989	Wap 1 (P 6502D)	A.L. Parres Ltd.

Associated minerals or products of value

1963 '0'

REFERENCES

Bailes, A.H., 1971, Preliminary compilation of the geology of the Snow Lake - Flin Flon - Sherridon area; Manitoba Department of Mines and Natural Resources, Mines Branch, Geological Paper 1/71, 27 p.

Gale, G.H., Baldwin, D.A., and Koo, J., 1980, A geological evaluation of Precambrian massive sulphide deposit potential in Manitoba; Manitoba Department of Energy and Mines, Mineral Resources Division, Economic Geology Report ER79-1, p. 109.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 49.

Kalliokoski, J., 1949, Weldon Bay, Manitoba; Geological Survey of Canada, Paper 49-5, 9p.

Kalliokoski, J., 1950, Weldon Bay, Manitoba; Geological Survey of Canada, Paper 50-5, 15p.

Kalliokoski, J., 1952, Weldon Bay map-area, Manitoba; Geological Survey of Canada, Memoir No. 270, p. 73.

Kalliokoski, J., 1953, Interpretations of the structural geology of the Sherridon - Flin Flon region, Manitoba; Geological Survey of Canada, Bulletin No. 25, 18p.

Manitoba Mines Branch:
a) Non-confidential Assessment Files; File Nos. 90478, 90482, 92020.

Parberry, D. and Gale, G.H., 1984, Mineral deposit investigations in the Flin Flon area; Manitoba Energy and Mines, Mineral Resources, Report of Field Activities, 1984, p. 60, 65.

MAP REFERENCES

Map 63K/14, Naosap Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa, Department of Energy, Mines and Resources (1981).

Map 2458G, Naosap Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/14e,f, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).

Maps C 20 344G, C 40 085G, Naosap Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).

Maps OF87-11-6A/OF87-11-6B, Naosap Lake area, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Preliminary Map 49-5, Weldon Bay, (Geology), Scale 1:31 680 - Accompanying Paper by Kalliokoski (1949), Geological Survey of Canada.

Second Preliminary Map 50-5A, Weldon Bay, (Geology), Scale 1:31 680 - Accompanying Paper by Kalliokoski (1950), Geological Survey of Canada.

MAP REFERENCES cont'd

#Map 1020A, Weldon Bay, (Geology), Scale 1:63 360 - Accompanying Memoir by Kalliokoski (1952), Geological Survey of Canada.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Map, Flin Flon, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).

Claim Map Series 63K/14NW, Scale 1:31 680, circa 1965, Mining Recording, Manitoba Mines Branch.

REMARKS

North of Sewap Lake, trace silver, copper was reported in DDH Asp 7 (Non-confidential Assessment File No. 90478).

Comp./Rev.	RM	PA
By Date	02-76	08-90

PRODUCT Pyrites	**N.T.S. AREA** 63K/14 SW	**REF.** PYR 2

NAME OF PROPERTY:
Neosap

OWNER OR OPERATOR AND ADDRESS
1990 - A.L. Parres Ltd.
P.O. Box 577
Flin Flon, Manitoba
R8A 1N4

OBJECT LOCATED: Prospect

MINING DIVISION The Pas

Lat. 54° 52.2'	Long. 101° 24.7'	UNCERTAINTY: 200 m
Sec.	Tp. 68	R. 26 WPM

DESCRIPTION OF DEPOSIT

The Precambrian country rocks surrounding the deposit include amphibolite derived from gabbro and diorite and a unit of hornblende granodiorite.

Drill logs indicate that a gneissic rock was the main lithologic type intersected in the core.

Pyrrhotite replaces narrow layers of siliceous volcanic rocks. Pyrrhotite occurs in massive form along with small amounts of chalcopyrite and sphalerite.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located west of Wickstendt Island, near the northwest shore of Naosap Lake.

The area was first staked under the Noranda Group by Billie Baker and Tom Hendricks around 1928. The claims were optioned to Pan American Mining Corporation Ltd. by Robert C. Klaas, John P. Richiger and Walter T. Townsend (Free Press, April 18, 1929).

Neosap (P 19246) was staked by Tom Wychstandt in 1948. In 1950 three holes, totalling 54 m (178 ft), were drilled (Non-confidential Assessment File No. 90477). The claim was cancelled in 1952.

J. Jackson recorded the Sap 12 (P 34149) in 1955. The claim was cancelled in 1956.

John Corman recorded Sap 447 (P 70804) in 1958. During the same year he transferred the claim to the Hudson Bay Exploration and Development Company Limited. A geophysical survey was recorded on the property in 1959 as well as some diamond drilling on a few of the Sap claims, but not Sap 447.

Associated minerals or products of value

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

CB 6161 was staked by Richard Murray in 1973. An airborne EM/Mag survey was done by Sherritt Gordon Mines, Limited that year (Non-confidential Assessment File No. 92020). The claim was cancelled in 1976.

The following stakings were recorded:

Year	Claim	Owner
1981-1983	CB 13480 (Lost 1)	Charles McLeod
1984-1986	Sap 6 (W 47355)	Philip Bachnick
- Trenches in the area were examined by the Manitoba Government (Parberry and Gale, 1984).		
1987-	Wic 3 (P 5983E)	Philip Bachnick
-Transferred to A.L. Parres Ltd. in June 1987		
-Transferred to Esso Resources Canada Limited in November 1987		
-Transferred to Homestake Mining (Canada) Limited in 1989		
-Transferred back to A.L. Parres Ltd. in 1990.		

REFERENCES

Bailes, A.H., 1971: Preliminary compilation of the geology of the Snow Lake - Flin Flon - Sherridon area; Manitoba Department of Mines and Natural Resources, Mines Branch, Geological Paper 1/71, 27 p.

Davies, J.F., Bannatyne, B.B., Barry, G.S., and McCabe, H.R., 1962, Geology and mineral resources of Manitoba; Manitoba Mines and Natural Resources, Mines Branch, p. 64-78.

Gale, G.H., Baldwin, D.A., and Koo, J., 1980: A geological evaluation of Precambrian massive sulphide deposit potential in Manitoba; Manitoba Department of Energy and Mines, Mineral Resources Division, Economic Geology Report ER79-1, p. 108.

Gunter, W.R. and Yamada, P.H., 1987, Industrial mineral occurrences in the Flin Flon, Snow Lake and Thompson areas; in Manitoba Energy and Mines, Minerals Division, Report of Field Activities, 1987, p. 94, 96.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 49.

Kalliokoski, J., 1949, Weldon Bay, Manitoba; Geological Survey of Canada, Paper 49-5, 9p.

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Kalliokoski, J., 1953, Interpretations of the structural geology of the Sherridon - Flin Flon region, Manitoba; Geological Survey of Canada, Bulletin No. 25, 18p.

Manitoba Mines Branch:
a) Non-confidential Assessment Files; File Nos. 90397, 90477, 92020.
b) Corporation Files; Pan American Mining Corporation Ltd.
c) Unpublished Information Files; 63K/14.

REFERENCES cont'd

Parberry, D. and Gale, G.H., 1984, Mineral deposit investigations in the Flin Flon area; Manitoba Energy and Mines, Mineral Resources, Report of Field Activities, 1984, p. 60, 65.

MAP REFERENCES

Map 63K/14, Naosap Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa, Department of Energy, Mines and Resources (1981).
Map 2458G, Naosap Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.
Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).
Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).
Map 63K/14c,d, Manitoba, (Vertical Gradient/Total Field), Scale 1:20 000; GSC Open File 756, Geological Survey of Canada (1981).
Maps C 20 344G, C 40 085G, Naosap Lake, (Experimental colour compilation, Aeromagnetic Total Field and Vertical Gradient), Scale 1:50 000, Province of Manitoba and Geological Survey of Canada (1983).
Maps OF87-11-6A/OF87-11-6B, Naosap Lake area, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.
Preliminary Map 49-5, Weldon Bay, (Geology), Scale 1:31 680 - Accompanying Paper by Kalliokoski (1949), Geological Survey of Canada.
Second Preliminary Map 50-5A, Weldon Bay, (Geology), Scale 1:31 680 - Accompanying Paper by Kalliokoski (1950), Geological Survey of Canada.
#Map 1020A, Weldon Bay, (Geology), Scale 1:63 360 - Accompanying Memoir by Kalliokoski (1952), Geological Survey of Canada.
Map, Figure 18, Flin Flon - Elbow Lake area, (Geology), Scale 1:300 000 - Accompanying Publication by Davies et al. (1962), Manitoba Mines Branch.
Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.
Preliminary Map 1977 CP-6, Naosap Lake, (Quaternary Geology), Scale 1:50 000, by V. Singhroy, Manitoba Mineral Resources Division.
Map, Flin Flon, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).
Claim Map Series 63K/14SW, Scale 1:31 680, circa 1952, Mining Recording, Manitoba Mines Branch.

REMARKS

The deposit is located on a flank of a magnetic high.

A copper occurrence is indicated on Wickstendt Island (Kalliokoski, 1952; Davies et al., 1962).

A drill hole in Nesosap Lake, 6.4 km south, intersected massive pyrite and returned assays of up to 4.46 g/t (0.13 oz/ton) Ag, 1 g/t (0.03 oz/ton) Au (Non-confidential Assessment File No. 92655).

Comp./Rev.	RM	PA
By Date	02-76	08-90

PRODUCT Copper **N.T.S. AREA** 63K/15 NW **REF.** CU 1

NAME OF PROPERTY:
Hassett Lake (CB 3182)

OWNER OR OPERATOR AND ADDRESS
1990-Norwest Minerals Limited
#2701, 1 First Canadian Place
Toronto, Ontario
M5X 1C7

OBJECT LOCATED: Drill Hole #2 **MINING DIVISION** The Pas

Lat. 54° 56' Long. 100° 47.8' **UNCERTAINTY:** 200 m

Sec. Tp. 68 R. 22 WPM

DESCRIPTION OF DEPOSIT

The deposit is underlain by andesitic volcanics and tuffs, which strike in a northerly direction and display vertical to steep dips. Quartz-carbonate stringers are common. Some felsite sections were encountered in drill sections. A large body of gneissic hornblende-biotite quartz diorite to granodiorite outcrops about 2 km to the west of the mineralized zone.

The zone of sulphides parallel the western shore of a long lake. McGlynn (1959) mapped a shear zone along the lake edge.

Diamond drilling encountered a zone of near massive medium-grained pyrite, possessing sparse pyrrhotite and chalcopyrite. The gangue consisted of carbonate and quartz.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located 5.7 km northeast of Elbow Lake, along the western edge of Hassett Lake.

Rod #39 (P 47838) was staked by Alex Hedin in 1956, and transferred to Prospeccors Airways Company, Limited that year. A total of 84 m (274 ft) of diamond drilling in four holes was done in 1957 on the nearby Rod #46 claim (Non-confidential Assessment File No. 90519). The Rod #39 claim was cancelled in 1957.

The area was restaked as CB 3182 by Victor Krassilowsky in 1970. Geophysical surveys were carried out by Tri-J Mineral Surveys Ltd. for Straus Exploration, Inc. in 1971 (Non-confidential Assessment File No. 90514). A horizontal loop electromagnetic survey outlined a medium strength conductor which parallels the west shore of Hassett Lake. A magnetometer survey indicated anomalous zones along those areas outlined by the electromagnetic survey.

Associated minerals or products of value
gold, silver, zinc

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

A 43 m (140 ft) diamond drill hole was completed in 1971 by Straus Exploration, Inc. on the former Rod #42 claim, located just north of Rod #39. The above mentioned conductor was identified as a 7 m (24 ft) section of near massive sulphides, mainly pyrite (Non-confidential Assessment File No. 91536). In 1972 four more holes were drilled for a total length of 251 m (822 ft) on the former Rod 39, 42 claims (Non-confidential Assessment File No. 90515). Assay values of up to 0.45% Cu, 0.11% Zn, 5.49 g/t (0.16 oz/ton) Ag, and 0.34 g/t (0.01 oz/ton) Au were reported.

Sherritt Gordon Mines, Limited carried out airborne electromagnetic and magnetic surveys over the area under Airborne Permit No. 114 in 1973 (Non-confidential Assessment File No. 92020).

CB 3182 was cancelled in 1974.

CB 4269 was staked by A.L. Parres in 1974 and was cancelled in 1976. L. Borgstrom, assisted by E. Rowe, staked CB 3871 (Alp 7) for A.L. Parres Ltd. in 1979. In 1981 Granges Exploration AB drilled a 78 m (257 ft) deep drill hole that intersected andesite tuff and rhyolite tuff with quartz stringers and occassional pyrite/pyrrhotite stringers, and a 1.8 m (6 ft) section of near massive to massive sulphides (mainly pyrite with trace-1% chalcopyrite and sphalerite); maximum drill core assays of 0.15 g/t Au, 3.5 g/t Ag, 0.09% Cu and 0.17% Zn were reported. The hole was drilled in the same area as the 43 m drill hole mentioned above. A relief from forfeiture was granted after a restaking of the claim in 1981. CB 3871 was cancelled in June 1985.

The area was restaked under Lou 2 (P 6120E) by Louis Mercredi for Westfield Minerals Limited in March 1987. A geochemical survey was carried out in 1988. The property was transferred to Norwest Minerals Limited in 1990.

REFERENCES

Bailes, A.H., 1971, Preliminary compilation of the geology of the Snow Lake - Flin Flon - Sherridon area; Manitoba Mines and Natural Resources, Mines Branch, Geological Paper 1/71, 27p.

Bruce, E.L., 1918, Amisk-Athapapuskow Lake district; Geological Survey of Canada, Memoir No. 105, 91p.

Davies, J.F., Bannatyne, B.B., Barry, G.S., and McCabe, H.R., 1962, Geology and mineral resources of Manitoba; Manitoba Mines and Natural Resources, Mines Branch, p. 64-78.

Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 53-54.

Manitoba Mines Branch:
a) Non-confidential Assessment Files; File Nos. 90514, 90515, 90519, 90643, 91536, 92020.
b) Corporation Files; Prospectors Airways Company, Limited

McGlynn, J.C., 1955, Heming Lake and Elbow Lake, Manitoba; Geological Survey of Canada, Paper 54-14, 13p.

REFERENCES cont'd

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Stockwell, C.H., 1935, Gold deposits of Elbow-Morton area, Manitoba; Geological Survey of Canada, Memoir 186, 74p.

MAP REFERENCES

*Map 63K/15, Elbow Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa.

Map 2462G, Elbow Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Maps C 21 291G, C 41 291G, 63K/15 e,f, Elbow Lake (Aeromagnetic total field and vertical gradient), Scale 1:20 000, Geological Survey of Canada (1987).

Maps C 21 509G, C 41 509G, Elbow Lake (Aeromagnetic residual total field and vertical gradient, colour maps), Scale 1:50 000, Geological Survey of Canada (1990).

Maps OF87-11-7A/OF87-11-7B, Elbow Lake area, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 1726, Athapapuskow Lake region, (Geology), Scale 1:190 080 - Accompanying Memoir by Bruce (1918), Geological Survey of Canada.

Map 321A, Elbow-Morton area, (Geology), Scale 1:126 720 - Accompanying Memoir by Stockwell (1935), Geological Survey of Canada.

Preliminary Map 54-14B, Elbow Lake, (Geology), Scale 1:63 360 - Accompanying Paper by McGlynn (1955), Geological Survey of Canada.

Map 1072A, Elbow Lake, (Geology), Scale 1:63 360 - Accompanying Memoir by McGlynn (1959), Geological Survey of Canada.

Map, Figure 18, Flin Flon - Elbow Lake area, (Geology), Scale 1:300 000 - Accompanying Publication by Davies et al. (1962), Manitoba Mines Branch.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Preliminary Map 1977 CP-7, Elbow Lake, (Quaternary Geology), Scale 1:50 000, by V. Singhroy, Manitoba Mineral Resources Division.

Map, Reed Lake, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).

#Claim Map Series 63K/15 NW, Scale 1:31 680, Circa 1974, Mining Recording, Manitoba Mines Branch.

REMARKS

The deposit is located over an area of "low" magnetic intensity.

Sulphides, with low base metal values, were also encountered on the adjacent CB 3176.

Comp./Rev.	RM	PA
By Date	04-76	10-90

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO.** 793

PRODUCT Copper **N.T.S. AREA** 63K/15 NW **REF.** CU 2

NAME OF PROPERTY:
Belcher #6

OWNER OR OPERATOR AND ADDRESS
1990-Almaden Resources Corporation
Suite 807 - 475 Howe St.
Vancouver, British Columbia
V6C 2B3

OBJECT LOCATED: Prospect **MINING DIVISION** The Pas

Lat. 54° 53.8'	Long. 100° 50.8'	**UNCERTAINTY:** 200 m
Sec.	Tp. 68	R. 23 WPM

DESCRIPTION OF DEPOSIT

The Precambrian country rocks are primarily composed of basic volcanic rocks and pillow lavas. A "plug" of porphyritic rhyolite outcrops about 1 km to the west of the prospect. Quartz diorite outcrops about 1 km north of the deposit.

Drill hole data indicates that the sulphide mineralization is associated with andesitic and rhyolitic zones. Some amphibolitic to chloritic schist was encountered.

At different depths "several feet" of massive sulphides were intersected. Pyrite, pyrrhotite and traces of chalcopyrite were the primary sulphides that were logged.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located about 400 m north of the northeast bay of Elbow Lake.

The deposit was first staked as part of the Gwendoline (File No. 164989) claim and the IXX (File No. 192479) claim probably in the late 1920's.

The property was probably optioned by Dwyer Elbow Lake Mining Syndicate, Limited in 1935 (Manitoba Mines Branch, Unpublished Information Files, 63K/15). Stockwell (1935) examined a prospect pit in quartz porphyry that is partly altered to sericite schist and mineralized with pyrite: a sample assayed 5.14 g/t (0.15 oz/ton) Au; soil adjacent to several quartz porphyry outcrops is heavily stained with iron.

Thomas R. Webb recorded Heather A (P 8006) in 1944. Fifteen metres (50 ft) of diamond drilling was recorded in 1945 and one year later two holes at 46 m (150 ft) each were drilled. The claim was cancelled in 1949.

Webb relocated the Heather claim as Elbow F (P 21794) in 1950. The claim was cancelled in 1951.

Associated minerals or products of value
gold, silver, nickel, zinc

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

In 1954 J.W. Jones recorded the Belcher #6 (P 32127) claim. Prospectors Airways Company, Limited optioned the property and carried out geophysical surveys and diamond drilling in 1957: a vertical loop electromagnetic survey and a magnetometer survey was done by Radar Exploration Company on behalf of Prospectors Airways; two holes totalling 444 m (1457 ft) were drilled on Belcher #6 (Non-confidential Assessment File Nos. 90517, 90516). Drill core assays of trace Cu, Zn, Au, Ni and up to 7.54 g/t (0.22 oz/ton) Ag were reported. Three holes were drilled on adjacent claims (Belcher 3, 5, Derry 11) that year: up to 0.14% Ni was reported from Derry 11 drill core. Belcher #6 was cancelled in 1960.

Dor #28 (P 4939A) was staked by Rod Morin in 1963, and restaked as Ter #48 (P 869E) by Lloyd Dempster in 1968. The claim was cancelled in 1971.

CB 3626 was staked by A. McKenzie in 1971 and was transferred to Noranda Exploration Company Limited soon after. A horizontal loop electromagnetic survey was done that year (Non-confidential Assessment File No. 90643). An ABEM survey was done just west of this area, and a horizontal loop EM survey and a magnetometer survey was done south of this area in 1971 (Non-confidential Assessment File Nos. 92654, 92042).

In 1972, Manitoba Mineral Resources Ltd. (MMR) acquired an option to earn 80% in Noranda's holdings. Four holes totalling 302 m (992 ft) were drilled north of this area (on the former Silverton 5, 6 claims, located two claims north of Belcher 6), and returned assays of up to 0.35% Zn, 0.05% Ni, trace Cu, Au (Non-confidential Assessment File Nos. 90643, 92654). Sherritt Gordon Mines, Limited carried out airborne electromagnetic and magnetic surveys over the area under Airborne Permit No. 114 in 1973 (Non-confidential Assessment File No. 92020). CB 3626 was cancelled in 1974.

In 1980 the area was partially restaked under CB 11424 (John) by John Kowaluk and under CB 11484 (Tina 1) by J. Bomford. In 1982, CB 11484 (Tina 1) was cancelled and CB 11424 (John) was restaked as Veda 2 (W 47377) by Dusan Dmitrovic. Veda 2 was cancelled in June 1985.

Web 2, 3 (P 8858E, 59E) were staked for Jim Brown in October 1985 and were assigned to Almaden Resources Corporation in 1987. Westfield Minerals Limited carried out geological mapping, prospecting, and geochemical surveys that year.

REFERENCES

Bailes, A.H., 1971, Preliminary compilation of the geology of the Snow Lake - Flin Flon - Sherridon area; Manitoba Mines and Natural Resources, Mines Branch, Geological Paper 1/71, 27p.

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Manitoba Mines Branch:
a) Non-confidential Assessment Files; File Nos. 90516, 90517, 90643, 91485, 92020, 92042, 92654.
b) Unpublished Information Files; 63K/15
c) Mining Engineering Files; Dwyer Elbow Lake Mining Syndicate, Limited
d) Annual Report on Mines and Minerals; 18th-p. 80
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Syme, E.C., 1978, Elbow Lake reconnaissance; in Manitoba Mines, Resources and Environmental Management, Mineral Resources Division, Report of Field Activities, 1978, p. 20-23.

MAP REFERENCES

*Map 63K/15, Elbow Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa.

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Maps C 21 509G, C 41 509G, Elbow Lake (Aeromagnetic residual total field and vertical gradient, colour maps), Scale 1:50 000, Geological Survey of Canada (1990).

Maps OF87-11-7A/OF87-11-7B, Elbow Lake area, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 1726, Athapapuskow Lake region, (Geology), Scale 1:190 080 - Accompanying Memoir by Bruce (1918), Geological Survey of Canada.

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Map 1072A, Elbow Lake, (Geology), Scale 1:63 360 - Accompanying Memoir by McGlynn (1959), Geological Survey of Canada.

Map, Figure 18, Flin Flon - Elbow Lake area, (Geology), Scale 1:300 000 - Accompanying Publication by Davies et al. (1962), Manitoba Mines Branch.

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Preliminary Map 1987 GSC, Geological setting of gold mineralization of Elbow Lake, Manitoba, (Geology), Scale 1:20 000, by A.G. Galley and D.E. Ames, Geological Survey of Canada.
Preliminary Map 1977 CP-7, Elbow Lake, (Quaternary Geology), Scale 1:50 000, by V. Singhroy, Manitoba Mineral Resources Division.
Map, Reed Lake, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).
#Claim Map Series 63K/15 NW, Scale 1:31 680, Circa 1974, Mining Recording, Manitoba Mines Branch.

REMARKS
The deposit is located over an area of "low" magnetic intensity.

Comp./Rev.	RM	PA
By Date	04-76	10-90

MANITOBA ENERGY AND MINES **MINERAL INVENTORY FILE NO.** 983

PRODUCT Copper **N.T.S. AREA** 63K/15 NE **REF.** CU 3

NAME OF PROPERTY:
Norris Lake (Lon Zone)

OWNER OR OPERATOR AND ADDRESS
1990- Granges Inc.
P.O. Box 849
Flin Flon, Manitoba
R8A 1N6

OBJECT LOCATED: **MINING DIVISION** The Pas

Lat. 54° 55.8' Long. 100° 33.6' UNCERTAINTY:

Sec. Tp. 68 R. 21 WPM

DESCRIPTION OF DEPOSIT

The property is underlain by banded hornblende-plagioclase gneiss (derived from Amisk Group basic volcanic rocks), garnetiferous biotite schist and gneiss, staurolite gneiss, minor quartzite, and hornblende gneisses, which are intruded by meta-pyroxenite to the northeast and by hornblende-biotite quartz diorite to the east (Map 1072A). Rhyolite (mineralized with pyrite, pyrrhotite, trace chalcopyrite, sphalerite) and banded iron formation have also been reported in drill core (Non-confidential Assessment File No. 90488).

A drill hole on Lon 2 intersected 7.6 m (25 ft) of mineralization in quartz-hornblende gneiss and chlorite quartzose rocks: 0-10% pyrite, 0-60% pyrrhotite, 0-5% chalcopyrite, and 0-15% 'zinc' were visibly noted in the core (Non-confidential Assessment File No. 91608). Pyrite, pyrrhotite, chalcopyrite, sphalerite and galena were noted in drill core from the Hed 45 claim (Non-confidential Assessment File No. 90489).

HISTORY OF EXPLORATION AND DEVELOPMENT

At Norris Lake, Bar Resources Limited (formerly Barbi Lake Copper Mines Limited) and Granges Exploration AB had some promising results on their copper-zinc prospect that enticed E & B Explorations Ltd. to contract for $400 000 in funding to earn a 33% interest in the property. A mineralized zone up to 3.9 m (13 ft) wide, grading 1.0-8.75% Cu and 6.10-9.0% Zn was indicated by previous drilling (Northern Miner, October 2, 1980). An EM survey indicated an anomalous zone on strike with the known mineralized zone (Northern Miner, May 3, 1979). One 213 m (700 ft) deep drill hole intersected a 2.2 m (7.2 ft) section grading 4.52% Cu, 8.15% Zn, 44.23 g/t (1.29 oz/ton) Ag and 0.93 g/t (0.027 oz/ton) Au (Northern Miner, October 2, 1980).

E & B Explorations Ltd. provided $322 000 for diamond drilling during 1981, and work resulted in proving 226 860 tonnes (250 000 tons) of ore reserves grading 2.51% Cu, 4.82% Zn, 20.78 g/t (0.606 oz/ton) Ag, 0.55 g/t (0.016 oz/ton) Au over an average width of 2.0 m (6.6 ft) to a depth of 366 m (1200 ft) (November 1981, Vancouver Stock Exchange filing statement in Manitoba Mines Branch, Corporation File, Bar Resources Limited).

Associated minerals or products of value
zinc, silver, gold

NAME OF PROPERTY
Norris Lake

N.T.S. AREA 63K/15 NE

FILE NO. 983
REF. CU 3

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

The deposit may be located on CB 9034, 9037, 9038, which were staked by Granges Exploration Aktiebolag in January 1978. Some of the earlier history of the property is tabulated below:

Claim	Year of staking/Activity
Beaver 1-8	around 1930 (no information available)
B.H. 3, 4 (P 11715, 16)	staked by Angus Boag in 1946. Work reported 1947-49. Cancelled in 1950.
P.G. 1-12 (P 20830-41)	staked by Andrew Paterson and Albert Gunville in 1949. Work reported in 1950. Cancelled in 1950-51.
Moss 4, 5 (P 25781, 82)	staked by Miles Anderson in 1952. Cancelled in 1954.
Airborne Permit 10	In 1955 Hudson Bay Exploration and Development Company Limited (H.B.E.D.) did airborne survey work over the property (Non-confidential Assessment File No. 91619).
Eff, Hed, and Muz group of claims	1956-63 (See Mineral Inventory card 63K/15 AU 17) H.B.E.D. had an option on the claims and carried out geophysical surveys in 1956-57; several EM conductors were outlined (Non-confidential Assessment File Nos. 90488, 89, 90; Map OF87-11-7A). In 1958 ten holes totalling 1744 m (5722 ft) were drilled on Hed 45 (in the northeast corner of CB 9037, former Moss 5 claim) and 26 holes totalling 2691 m (8828 ft) were drilled on the Eff claims (mainly north part of CB 9034 and south part of CB 9037) (see 63K/15 AU 17). In 1957-58, 17 holes were drilled north of CB 9038 and west of Loonhead Lake (Non-confidential Assessment File No. 90490).
Lon 1-4 (P 1649A-52A)	staked by Hudson Bay Mining and Smelting, Company Limited (HBMS) in 1962. EM survey work was done on the claims. On Lon 2, four holes totalling 1383 m (4538 ft) were drilled in 1964, followed by a 490 m (1606 ft) deep drill hole in 1966 (Non-confidential Assessment File Nos. 91608, 91607).
Lon 5, 6 (P 1653A-54A)	staked by J.D. Poliquin in 1962 and assigned to H.B.E.D. in 1963. A 65 m (212 ft) deep drill hole was drilled on Lon 6 in 1964 (Non-confidential Assessment File No. 91608)
Lon 7-10, 13-14 (P 4823B-26B, 29B-30B)	staked by Charles Ridder and assigned to H.B.E.D. in 1964
Lon 11, 12 (P 4827B-28B)	staked by HBMS in 1964
Lon 15 (P 4061C)	staked by Maurice Pew in 1966 and assigned to H.B.E.D.

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

Claim	Year of staking/Activity cont'd
Lon Group	November 1964, Lon 1-14 claims were grouped; December 1966, Lon 2, 13-15 grouped; Lon 1-4, 11-12 converted to 21 year lease M-9041 in 1968. Diamond drilling reported 1965-71. Lon 5, 6 were cancelled in 1969; Lon 7-10, 13-14 in 1970; Lon 15 in 1972. Lease M-9041 was cancelled in 1975 and the claims were transferred to H.B.E.D.. Lon 11, 12 were cancelled in 1976; Lon 1-4 in 1977.
Sko 24 (P 3693C)	staked by A.J. McLeod over former P.G. 1 claim and assigned to Canadian Nickel Company Limited in 1966. Cancelled in 1967.
Airborne Permit 114	Sherritt Gordon Mines, Limited did airborne electromagnetic and magnetic survey work under AP 114 in 1973 (Non-confidential Assessment File No. 92020)

CB 9034, 9037 and 9038 were staked by Granges Exploration Aktiebolag in January 1978. The claims, covering 709 hectares, were grouped in 1980. The property was transferred to Granges Exploration Ltd. in 1986. The company's name was changed to Granges Inc. in 1989.

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Hosain, I.T., 1988, An update summary and evaluation of geophysical data from open assessment files of the Flin Flon - Snow Lake greenstone belt (NTS sheets 63K (N 1/2) and 63J/12, 13); Manitoba Energy and Mines, Mines Branch, Open File Report OF87-11, p. 57.

Manitoba Mines Branch:
  a) Non-confidential Assessment Files; File Nos. 90488, 90489, 90490, 91607, 91608, 91619, 92020.
  b) Corporation Files; Bar Resources Limited; Granges Exploration Aktiebolag
  c) Unpublished Information Files; 63K/15

McGlynn, J.C., 1955, Heming Lake and Elbow Lake, Manitoba; Geological Survey of Canada, Paper 54-14, 13p.

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Map 2462G, Elbow Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/15 g,h, (Aeromagnetic Vertical Gradient, Total Field), Scale 1:20 000; GSC Open File 2219, Geological Survey of Canada (1990).

Maps C 21 509G, C 41 509G, Elbow Lake (Aeromagnetic residual total field and vertical gradient, colour maps), Scale 1:50 000, Geological Survey of Canada (1990).

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#Map 1072A, Elbow Lake, (Geology), Scale 1:63 360 - Accompanying Memoir by McGlynn (1959), Geological Survey of Canada.

Map, Figure 18, Flin Flon - Elbow Lake area, (Geology), Scale 1:300 000 - Accompanying Publication by Davies et al. (1962), Manitoba Mines Branch.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Preliminary Map 1977 CP-7, Elbow Lake, (Quaternary Geology), Scale 1:50 000, by V. Singhroy, Manitoba Mineral Resources Division.

Map, Reed Lake, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).

Claim Map Series 63K/15 NW, Scale 1:31 680, Circa 1978, Mining Recording, Manitoba Mines Branch.

REMARKS

The deposit may be located on CB 9034, 9037, 9038 (G. Trembath, May 1990). Object located is the centre of Lon 2.

Comp./Rev.	AJ	PA
By Date	10-80	10-90

PRODUCT Zinc **N.T.S. AREA** 63K/15 NW **REF.** ZN 1

NAME OF PROPERTY:
Silverton #2

OWNER OR OPERATOR AND ADDRESS
1990-Norwest Minerals Limited
#2701, 1 First Canadian Place
Toronto, Ontario
M5X 1C7

OBJECT LOCATED: Prospect **MINING DIVISION** The Pas

Lat. 54° 55' Long. 100° 50' UNCERTAINTY: 200 m

Sec. Tp. 68 R. 23 WPM

DESCRIPTION OF DEPOSIT

The Precambrian rocks underlying the property are "chiefly andesitic lavas with a northerly striking cleavage. The lava in the northwest part of the group is invaded by a body of granite that extends for many miles to the north. Elsewhere the lavas are cut by a small body of "quartz-eye" granite and by several dykes and other bodies of quartz porphyry" (Stockwell, 1935).

Diamond drilling intersected andesite, amphibolite, hornblende-chlorite-biotite schist and fractured quartz-rich zones.

The main sulphides are pyrite and pyrrhotite.

HISTORY OF EXPLORATION AND DEVELOPMENT

The deposit is located near a small pond about 1.6 km north of Elbow Lake.

The area was first staked under Jumper 2 (File No. 201463) and the south part of Platinum King #5 (File No. 176959) probably in the late 1920's.

The deposit was located as the Silverton #2 (P 895) in 1933 by Harry N. Hawes. During the summer of 1934, the Silverton claims were under option to the Dwyer Elbow Lake Mining Syndicate, Limited. The company found three north-south trending schisted dykes (in greenstone), which were well mineralized with pyrite, arsenopyrite, and pyrrhotite; also noted were quartz veins in 'shattered syenite porphyry' (Manitoba Mines Branch, Unpublished Information Files, 63K/15). The deposit was reported to average $5.40/ton in gold, nickel and copper, but Stockwell (1935) noted that the results were probably based on chip or grab samples. According to Stockwell (1935), the deposit is exposed over a width of 15 m (50 ft) in the middle part of an easterly trending trench 38 m (125 ft) long.

A prospect shaft had been sunk to a depth of 6.4 m (21 ft) in altered schist in a trench at the east end of the pyrrhotite body, on the Silverton 4 claim. The schist, which also contains a few quartz stringers, was reported to be about 4.6 m (15 ft) wide and has apparently "showed gold in panning and returned high assays in gold" (Stockwell, 1935).

Associated minerals or products of value
copper, gold, nickel

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

The Silverton 2 claim was transferred to Gordon P. Smith in 1935, and then to A.D. MacPherson in 1939. The claim was leased under 21 year lease M-1185 in 1941. The lease was cancelled in 1962.

CB 3172 was staked over the property by A.M. McKenzie in 1970, and assigned to Noranda Exploration Company Limited later that year. A horizontal loop electromagnetic survey was carried out in 1971 (Non-confidential Assessment File No. 90643). Manitoba Mineral Resources Ltd. held an option on the property in 1972. That year, six holes totalling 603 m (1979 ft) were drilled to test three strong and one medium EM conductor. Assays of up to 1.37 g/t (0.04 oz/ton) Au, 0.27% Cu and 1.44% Zn were reported (Non-confidential Assessment File Nos. 90643, 92654). The claim block was cancelled in 1973.

Sherritt Gordon Mines, Limited carried out airborne electromagnetic and magnetic surveys over the area under Airborne Permit No. 114 in 1973 (Non-confidential Assessment File No. 92020).

Lou (P 6105E) was staked over the deposit by Bruce Murray for Westfield Minerals Limited in 1987. The property was transferred to Norwest Minerals Limited in 1990.

REFERENCES

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Manitoba Mines Branch:
    a) Non-confidential Assessment Files; File Nos. 90643, 92020, 92654, .
    b) Unpublished Information Files; 63K/15
    c) Mining Engineering Files; Dwyer Elbow Lake Mining Syndicate, Limited
    d) Annual Report on Mines and Minerals; 7th-p. 37-38; 8th-p. 38; 12th-p. 44
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MAP REFERENCES

Map 63K/15, Elbow Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa.

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Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).
Map 63K/15 e,f, (Aeromagnetic Vertical Gradient, Total Field), Scale 1:20 000; GSC Open File 1478, Geological Survey of Canada (1987).
Maps C 21 291G, C 41 291G, 63K/15 e,f, Elbow Lake (Aeromagnetic total field and vertical gradient), Scale 1:20 000, Geological Survey of Canada (1987).
Maps C 21 292G, C 41 292G, Elbow Lake (Aeromagnetic total field and vertical gradient, colour maps), Scale 1:50 000, Geological Survey of Canada (1987).
Maps C 21 509G, C 41 509G, Elbow Lake (Aeromagnetic residual total field and vertical gradient, colour maps), Scale 1:50 000, Geological Survey of Canada (1990).
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Preliminary Map 54-14B, Elbow Lake, (Geology), Scale 1:63 360 - Accompanying Paper by McGlynn (1955), Geological Survey of Canada.
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Map, Figure 18, Flin Flon - Elbow Lake area, (Geology), Scale 1:300 000 - Accompanying Publication by Davies et al. (1962), Manitoba Mines Branch.
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Map, Reed Lake, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).
Claim Map Series 63K/15 NW, Scale 1:31 680, Circa 1972, Mining Recording, Manitoba Mines Branch.

REMARKS

1. The deposit is located between a magnetic "high" and a "low".
2. On the Big Four 3 claim, northeast of Silverton 2, Dwyer Elbow Lake Mining Syndicate, Limited found a 2.7 m (9 ft) quartz vein assaying $6.43 in an area of greenstone and heavy sulphides; an 18 m deep pit was put down (Manitoba Mines Branch, Unpublished Information File, 63K/15; Annual Reports 7th, 8th).
3. Juma Mining and Exploration Limited found base and precious metals on their Elbow Lake property (Manitoba Mines Branch, Corporation File).
4. Platinum was reported northeast of Elbow Lake in 1929 (Manitoba Mines Branch, Mining Engineering Files, Great Northern Lakes Drilling, Mining and Development Syndicate).

Comp./Rev.	RM	PA
By Date	02-76	10-90

2008 '0'

PRODUCT Zinc **N.T.S. AREA** 63K/16 SE **REF.** ZN 8

NAME OF PROPERTY:
Dew 40

OWNER OR OPERATOR AND ADDRESS
1990-W. Bruce Dunlop Limited (N.P.L.)
201-2639 Portage Avenue
Winnipeg, Manitoba
R3J 0P7

OBJECT LOCATED: Centre of Dew #40 **MINING DIVISION** The Pas

Lat. 54° 45.81' Long. 100° 03.55' **UNCERTAINTY:** 400 m

Sec. Tp. 66, 67 R. 17, 18 WPM

DESCRIPTION OF DEPOSIT

The area is underlain by Precambrian interbedded argillite and greywacke, flanked by mafic volcanic rocks to the northwest and granite to the east (Map 929A). Two drill holes intersected a body of feldspar porphyry that is 53 m (175 ft) wide.

DDH 2 intersected argillite with no sulphides, and silicified argillite and feldspar porphyry, with quartz-tourmaline veins/ stringers and fine grained tourmaline and disseminated sulphides (pyrite, sphalerite, arsenopyrite, pyrrhotite, chalcopyrite); Cu, Zn, Ag were reported in drill core assays of feldspar porphyritic rocks. DDH 5 intersected argillite with tiny barren quartz stringers, feldspar porphyritic rocks (pink, massive and green, altered types) with up to 3% sulphides (arsenopyrite, pyrite, pyrrhotite, trace sphalerite) and some vein quartz, and at the bottom of the hole, argillite with pyrite, minor disseminated pyrrhotite, arsenopyrite, and 5% vein quartz with trace chalcopyrite; Au, Ag were reported in assays of feldspar porphyritic rocks (Non-confidential Assessment File No. 90234).

The occurrence is east of the Berry Creek Fault.

HISTORY OF EXPLORATION AND DEVELOPMENT

The property is located approximately 900 m east of Berry Creek, 2.1 km west of Tramping Lake, and 7.5 km south of Threehouse Lake.

Dew 40 (P 43651) was staked in June 1956 by K. Olson, and assigned to H.E. Martin in August 1956. That year Newkirk Mining Corporation carried out geophysical surveys (magnetometer, resistivity and VLEM), geological mapping (Scale 1:2400), and diamond drilling (Non-confidential Assessment File Nos. 90233, 90234). DDH 2, drilled to a depth of 155 m (507.5 ft), returned maximum assays of 1.48% Zn, 0.12% Cu, 3.43 g/t (0.1 oz/ton) Ag for feldspar porphyritic rocks; DDH 5, 126 m (414 ft) deep, returned assays of up to 9.26 g/t (0.27 oz/ton) Ag, 1.71 g/t (0.05 oz/ton) Au (Non-confidential Assessment File No. 90234).

Associated minerals or products of value
copper, gold, silver

HISTORY OF EXPLORATION AND DEVELOPMENT cont'd

An airborne electromagnetic survey was done by Canadian Nickel Company Limited under AP 19 in 1957 (Ground Hog-Sheet 10 in Non-confidential Assessment File No. 91624).

In December 1956 Newkirk Mining Corporation Limited changed its name to Continental Mining Exploration Limited, which in 1958 amalgamated with Canadian Lithium Mining Corporation to form Augustus Exploration Limited. The Dew claim was cancelled in 1961.

In 1973 Alfred C. (Lyle) Borgstrom staked CB 5515 and CB 5662 over the occurrence. Granges Exploration AB did airborne electromagnetic and magnetic survey work under AP 112 that year (Non-confidential Assessment File No. 92019) and took out an option on the property. Granges did diamond drilling work west of Berry Creek in 1975-77 (see remarks). CB 5662 was cancelled in 1976; CB 5515 was cancelled in 1979.

Granges Exploration AB staked CB 11330 (Ping 4) in 1980, but it was cancelled in 1982.

Berry 10 (P 8377E) was staked by W. Bruce Dunlop Limited (N.P.L.) in June 1990.

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Manitoba Mines Branch:
a) Non-confidential Assessment Files; File Nos. 90233, +90234, 91624, 92019, 92195, 92196.

MAP REFERENCES

Map 63K/16, File Lake, (Topographic), Scale: 1:50 000, Surveys & Mapping Branch, Ottawa.

Map 8455G, File Lake, (Aeromagnetic), Scale 1:63 360, Manitoba Mines Branch and Geological Survey of Canada.

Map 77-1985, West-Central Manitoba, (Lake sediment and water geochemical survey), Scale 1:250 000; GSC Open File 1212, Geological Survey of Canada (1985).

Map 36163G, Cormorant Lake, (Airborne Gamma Ray Spectrometry), Scale 1:250 000, Province of Manitoba, Province of Saskatchewan, Geological Survey of Canada (1978).

Map 63K/16 a,b, (Aeromagnetic VLF-EM, Vertical Gradient, Total Field), Scale 1:20 000; GSC Open File 2219, Geological Survey of Canada (1990).

Maps OF87-11-8A/OF87-11-8B, File Lake area, (Geophysical compilations), Scale 1:50 000 - Accompanying Report by Hosain (1988), Manitoba Mines Branch.

Map 1801, Reed and Wekusko Lakes region, (Geology), Scale 1:126 720 - Accompanying Memoir by Alcock (1920), Geological Survey of Canada.

Preliminary Map 46-9B, Snow Lake, (Geology), Scale 1:31 680 - Accompanying Paper by Harrison (1946), Geological Survey of Canada.

Map 929A, File Lake, (Geology), Scale 1:63 360 - Accompanying Memoir by Harrison (1949), Geological Survey of Canada.

Map, Snow Lake - Flin Flon - Sherridon area, (Geology), Scale 1:253 440 - Accompanying Paper by Bailes (1971), Manitoba Mines Branch.

Map, Reed Lake, (Surficial Geology), Scale 1:125 000, by M.D. Clarke; GSC Open File 1900, Geological Survey of Canada (1988).

Preliminary Map 1988 SL-2, File Lake, (Surficial Geology and Aggregate Resources), Scale 1:50 000, by M. Mihychuk, Manitoba Mineral Resources Division.

MDS Map No. 5, File Lake (63K/16) area, (Mineral deposits and occurrences), Scale 1:50 000 - Accompanying Report by Fedikow et al. (1989), Manitoba Energy and Mines.

#Claim Map Series 63K/16 SE, Scale 1:31 680, Circa 1960, Mining Recording, Manitoba Mines Branch.

Airphoto Number: A26366-182.

REMARKS

1. This card was previously part of mineral inventory card 63K/9 NE CU 3, circa 1975, which has been rewritten into two cards, 63K/9 AG 2 and 63K/16 ZN 8.

REMARKS cont'd

2. Feldspar porphyry rocks were also intersected on the Dew 25 claim (Non-confidential Assessment File No. 90234; see 63K/9 AG 2, remarks).
3. West of Berry Creek, on CB 5514, CB 5515, drill core assays of up to 1.24% Zn, 0.37% Cu, 7.19 g/t (0.21 oz/ton) Ag, 0.93 g/t (0.027 oz/ton) Au were reported (Non-confidential Assessment File Nos. 92195, 92196; Location No. 64, Fedikow et al., 1989, p. 186-187).

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